



PATENTS  
ABBE-1

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant/Appellant : Nancy A. Abbe  
Application No. : 09/844,627 Confirmation No.: 2399  
Orig. Filing Date : April 27, 2001  
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For : APPARATUS FOR STORING FOOD  
Group Art Unit : 3727  
Examiner : Stephen Castellano

New York, New York 10020  
November 13, 2003

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APPLICANT/APPELLANT'S APPEAL  
BRIEF UNDER 37 C.F.R. § 1.192

Sir:

Pursuant to 37 C.F.R. § 1.192, applicant/appellant files this Appeal Brief, in triplicate, in support of the August 13, 2003 Notice of Appeal from the Examiner's final Office Action of June 5, 2003.

Applicant/appellant has filed concurrently herewith a petition for a one-month extension of time for submitting

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this Appeal Brief. With the extension, the Appeal Brief is due on or before November 13, 2003. A check in the amount of \$55.00, in payment of the extension fee required under 37 C.F.R. §§ 1.136(a) and 1.17(a)(1), is enclosed herewith. A check in the amount of \$165.00, in payment of the filing fee (small entity) for this Appeal Brief required under 37 C.F.R. § 1.17(c), is also enclosed. The Director is authorized to charge any additional fees that may be due in connection with the filing of this Appeal Brief, or to credit any overpayment, to Deposit Account No. 06-1075. A separate Authorization to Charge Deposit Account is enclosed for that purpose (in duplicate).

In view of the arguments and authorities set forth below, this Board should find the rejections of claims 1-9, 13-17, 19-20, 24 and 26 of this application, which have now been finally rejected, to be in error and should reverse them. Claims 1-9, 13-17, 19-20, 24 and 26 are patentable.

This Brief has the following appendices:

Appendix A: Copy of claims 1-9, 13-17, 19-20, 24 and 26 involved in this Appeal;

Appendix B: Copy of the final Office Action dated June 5, 2003;

Appendix C: Copies of U.S. Patent Nos. 242,805, 417,082, 746,264, 1,147,041, 4,432,151, 4,505,059, 4,927,041, 6,062,380, and 6,253,918; and

Appendix D: Dictionary definitions of "translucent" and "fixed" from Merriam Webster's Collegiate Dictionary (10<sup>th</sup> ed. 1997), and dictionary definition of "translucent" from American Heritage Dictionary of the English Language (3<sup>rd</sup> ed. 1996).

I. IDENTIFICATION OF REAL PARTY-IN-INTEREST

Pursuant to 37 C.F.R. § 1.192(c)(1), applicant/appellant respectfully advises the Board that the real party-in-interest in the above-identified patent application is the party named in the caption of this brief.

II. RELATED APPEALS AND INTERFERENCES

Pursuant to 37 C.F.R. § 1.192(c)(2), applicant/appellant respectfully advises the Board that there are no other appeals or interferences known to it or its legal representative which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

III. STATUS OF CLAIMS

Claims 1-9, 13-17, 19-20, 24 and 26 are pending in this application and are on appeal. Claims 10-12, 18, 21-23 and 25 were cancelled during prosecution of this application, and thus are not the subject of this Appeal.

#### IV. STATUS OF AMENDMENTS

Applicant/appellant has not submitted any amendment pursuant to 37 C.F.R. § 1.116 or in reply to the Examiner's June 5, 2003 final Office Action, from which this Appeal is being sought.

#### V. SUMMARY OF THE INVENTION

Applicant/appellant's invention, as defined by the pending claims on appeal, is directed towards a food storage unit that includes a container having a fixably sealed lid. According to the principles of the present invention, a channel region including a label container area is formed between an inner wall and an outer wall of the container, where the inner wall and outer walls have a fixed geometric relationship. According to one embodiment of the present invention, the label container area is separated from the remainder of the channel region by a channel barrier, or label support member, that is physically attached to both the inner wall and the outer wall of the container. Identifying labels, moreover, may be placed in the label container area without disassembling the container or varying the geometric relationship between the inner and outer walls. These labels may subsequently be viewed by a user through a translucent portion of the outer wall without the user having to unseal

and open the container (i.e., take off the fixably sealed lid) or remove the container from a cooling unit, such as a refrigerator or freezer, that houses the food storage unit.

## VI. ISSUES ON APPEAL

The following issues are to be reviewed on this appeal:

A. Whether or not applicant/appellant's invention as defined by claims 1-9, 13-17, 19-20, 24 and 26 is described in the specification in the manner required by 35 U.S.C. § 112, first paragraph.

B. Whether or not applicant/appellant's invention as defined by claims 1-6, 9, 13, 15, 19-20 and 24 is anticipated by Oxley U.S. Patent 1,147,041 ("Oxley"), so as to be unpatentable under 35 U.S.C. § 102(b).

C. Whether or not applicant/appellant's invention as defined by claims 1-6, 9, 13, 15, 20, 24 and 26 is anticipated by either Morris U.S. Patent No. 4,505,059 ("Morris 1") or Morris U.S. Patent No. 4,432,151 ("Morris 2"), so as to be unpatentable under 35 U.S.C. § 102(b).

D. Whether or not applicant/appellant's invention as defined by claims 1, 3, 5, 9, 15, 19, 24 and 26 is anticipated by Pichereau U.S. Patent No. 4,17,082

("Pichereau"), so as to be unpatentable under 35 U.S.C. § 102(b).

E. Whether or not applicant/appellant's invention as defined by any of claims 1-9, 13-17, 19-20, 24 and 26 is obvious from some combination of Barhite U.S. Patent No. 746,264 ("Barhite"), Dorney U.S. Patent No. 6,062,380 ("Dorney"), Greiner U.S. Patent No. 6,253,918 ("Greiner"), Hepburn U.S. Patent No. 4,927,041 ("Hepburn"), Morris 1, Morris 2, Oxley, and Wooster U.S. Patent No. 242,805 ("Wooster"), so as to be unpatentable under 35 U.S.C. § 103(a).

#### VII. GROUPING OF CLAIMS

As to each ground of rejection identified above as an issue on appeal, the claims subject to that rejection stand or fall together with respect to that rejection.

#### VIII. ARGUMENT

The Examiner has rejected applicant/appellant's claims on numerous grounds, relying on 35 U.S.C. §§ 112, 102 and 103. In particular, the June 5, 2003 final Office Action ("final Action") contains one rejection based on 35 U.S.C. § 112, three separate rejections based on 35 U.S.C. § 102, and seven separate rejections based on 35 U.S.C. § 103.

Applicant/appellant respectfully submits that all of these rejections are in error, and each of them should be reversed.

Moreover, before responding to each of the Examiner's numerous grounds of rejections, applicant/appellant wishes to apologize for the length of this Appeal Brief. Despite the fact that several of the rejections set forth in the final Action lack a proper basis in law, applicant/appellant must nevertheless respond to each of the Examiner's rejections, and has attempted to do so in as concise a manner as possible.

A.    The Rejection under 35  
      U.S.C. § 112, First Paragraph

In the final Action, the Examiner rejected claims 1-9, 13-17, 19, 20, 24 and 26 under 35 U.S.C. § 112, first paragraph, as containing subject matter not described in the specification in such a way as to enable one skilled in the art to make and/or use the invention. In particular, the Examiner contends that applicant/appellant's "usage of translucent to represent a material that when viewed through objects appear clearly visible is repugnant to the well known meaning of the term 'translucent'" (Office Action, pages 6-7).

It is well settled that applicant/appellant "may be his or her own lexicographer as long as the meaning assigned

to the term is not repugnant to the term's well known usage" and the meaning of the term is "sufficiently clear in the specification" (see Manual of Patent Examining Procedure, 8<sup>th</sup> edition ("MPEP"), page 2100-48). Both of these conditions are met in the present application.

First, the specification as originally filed clearly establishes the meaning of the term "translucent." For example, page 9, lines 13-18 of the specification clearly explain that fabricating a portion of the outer wall out of a translucent material would allow users to easily read a label through the outer wall. Accordingly, the meaning of the term "translucent" is sufficiently clear in the specification.

Second, with regards to the Examiner's assertion that the use of "translucent" is repugnant to the well known meaning of the term, applicant/appellant respectfully submits that the Examiner's position is simply not tenable. In support of his assertion, the Examiner cited the American Heritage Dictionary of the English Language, Third Edition ("The Dictionary"), which defines "translucent" as "transmitting light but causing sufficient diffusion to prevent perception of distinct images." However, applicant/appellant respectfully points out that The Dictionary also defines "translucent" as "clear, lucid" (see Appendix D). A similar definition is also provided in Merriam Webster's

Collegiate Dictionary, 10<sup>th</sup> Edition, which defines "translucent" as "permitting the passage of light" as well as "clear, transparent" (see Appendix D). These definitions, one of which is directly from the source cited by the Examiner, clearly render the Examiner's rejection based on the usage of the term "translucent" baseless.

In fact, the correctness of applicant/appellant's use of the term "translucent" is further demonstrated by the Examiner's use of that term in the final Action. For example, on page 3 of the final Action, the Examiner stated that an outer wall may be "either translucent or transparent in order to see an item placed within the space between the inner and outer walls of a container" (emphasis added). This is a plain admission by the Examiner that an object (e.g., a label) can be seen through a "translucent" outer wall. As such, applicant/appellant's use of "translucent" cannot be repugnant to the term's well known meaning.

For at least the above reasons, applicant/appellant respectfully submits that the use of the term "translucent" is proper. The Examiner's rejection of the claims under § 35 U.S.C. § 112, first paragraph, is therefore in error, and should be reversed.

B.     The Rejection of the Claims Under  
       35 U.S.C. § 102, in view of Oxley

In the final Action, the Examiner finally rejected claims 1-6, 9, 13, 15, 19, 20 and 24 under 35 U.S.C. § 102(b) as anticipated by Oxley. The Examiner's rejection is in error and should be reversed.

For a rejection under 35 U.S.C. § 102 to be proper as a matter of law, the reference must teach or disclose every limitation of the claimed invention. In re Marshall, 198 USPQ 344, 346 (C.C.P.A. 1978); Lindemann Maschinenfabrik GMBH v. American Hoist and Derrick Co., 221 USPQ 481, 485 (Fed. Cir. 1984). According to the guidelines set forth by the MPEP, the reference must "teach or suggest all of the claim limitations" to support a rejection of anticipation under § 102 (see MPEP, page 2100-121).

The claimed invention includes the limitation of "at least one label support member that is located within [the] channel and is physically attached to [the] inner and outer walls" as well as the limitation that the inner and outer walls have "a fixed geometric relationship" (see claim 1). With all due respect, there simply is no basis for this rejection. In fact, the Examiner admits that "Oxley discloses the invention except for the label support member being physically attached by a direct connection to the inner

and outer walls of the container and the fixed geometric relationship"\* (final Action, page 4, lines 12-14, emphasis added). Clearly, the Examiner's admission that Oxley lacks both the claimed label support member and the claimed fixed geometric relationship must result in the finding that the Examiner's rejection of the claimed invention as being anticipated by Oxley is improper and should be reversed.

Applicant/appellant also disagrees with the Examiner's contention that Oxley anticipates the claimed invention because window E and partition F have a fixed geometric relationship once they have been assembled ("the inner and outer walls don't move with respect to each other unless the user intentionally wants to disassemble the unit," final Action, page 2, lines 24-25).\*\*

First, Oxley cannot function as intended if window E and partition F have a "fixed" relationship because once E and F are fixed, their geometric relationship cannot be

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\* Oxley's disclosure supports the Examiner's admission. For example, the lack of a fixed relationship between the "inner and outer walls" is evident from the fact that partition F, a portion of which makes up the inner wall, is placed in the display box, a portion of which makes up the outer wall, only after articles C have been inserted into the pocket shelf structure. Thus, there cannot be a fixed relationship between the inner and outer walls.

\*\* When two objects have a "fixed" geometric relationship, they are "securely placed or fastened ... [and are] not subject to change." (Merriam Webster's Collegiate Dictionary, 10th Edition, definition of "fixed"). Thus, the Examiner's allegation is clearly erroneous.

changed. Thus, the goods in the display can never be removed, nor can they be replaced.

Second, even assuming the Examiner's strained (and incorrect) construction\* such that window E and partition F did have a "fixed" geometric relationship, the channel portion between window E and partition F would then not be "accessible by a user for the insertion of a label therein" (see claim 1). The Examiner cannot have it both ways. If there is a "fixed" geometric relationship between window E and partition F, there is not a channel that is accessible to the user. If a channel exists that is accessible to the user, the window E and partition F are not "fixed." The Examiner admits this on page 4 of the final Action which notes that providing a fixed geometric relationship would necessitate the removal of "the uppermost shelf (A) or the two upper shelves (A) in order to provide access" (emphasis added).

Moreover, Oxley does not teach or suggest applicant/appellant's claimed "lid that may be fixably attached to [the] container top to seal [the] container closed" (see claim 1). Oxley teaches an improved box for displaying bakery products that are then sold throughout each day. For that reason, Oxley is not concerned with the

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\* The Examiner's construction of "fixed" geometric relationship is so tenuous.

preservation of perishable items. To the contrary, the goal of Oxley's invention is to maintain the goods in a "pleasing appearance" so they are all sold. There is not the slightest suggestion anywhere in Oxley of applicant/appellant's claimed lid.

For at least the foregoing reasons, the rejection of claims 1-6, 9, 13, 15, 19, 20 and 24 under this section is clearly erroneous. Accordingly, applicant/appellant respectfully requests that the rejection under 35 U.S.C. § 102(b) be reversed.

C.    The Rejection of the Claims Under 35  
      U.S.C. § 102, in view of Morris 1 and Morris 2

Claims 1-6, 9, 13, 15, 20, 24 and 26 were finally rejected by the Examiner under 35 U.S.C. § 102(b) as anticipated by both Morris 1 and Morris 2 ("the Morris patents"). These rejections are respectfully traversed.

Contrary to the Examiner's assertion on page 7, line 15, of the final Action, neither of the Morris patents "disclose[s] food storing." Instead, both of the Morris patents are directed towards "advertising display apparatus." In fact, while the apparatus described in each of the Morris patents are intended to provide advertisements in commercial settings (e.g., in a restaurant), the only use of the word

"food" in these patents occurs while describing how the advertisements can be viewed by customers "while they wait for and eat their food" (see Morris 1 at column 1, lines 18-19 and Morris 2 at column 1, lines 14-15). The storage of food in the apparatus of the Morris patents is simply never contemplated. Thus, it should not be surprising that multiple elements of applicant/ appellant's claimed invention are not present in the Morris patents.

For example, for the same reasons discussed above with respect to Oxley, neither of the Morris patents provide a channel region that is formed between inner and outer walls having a "fixed geometric relationship" while at the same time providing a channel region that includes a "label container area that is accessible by a user for the insertion of a label therein" (see claims 1 and 26). In particular, display section 46 of Morris 1 and support section 41 of Morris 2 are only accessible for the insertion of advertisements (e.g., business cards) after the respective inner walls that serve to press the advertisements against the outer wall have been removed (which is why applicant/appellant submits that the Morris patents, like Oxley, do not teach a "fixed" relationship).

Moreover, the Morris patents, like Oxley, fail to teach or suggest applicant/appellant's claimed limitation of

"a lid that may be fixably attached to [the] container top to seal [the] container CLOSED" (see claims 1 and 26).

For at least the foregoing reasons, applicant/appellant respectfully submits that the rejection of claims 1-6, 9, 13, 15, 20, 24 and 26 in this section is clearly erroneous. Accordingly, this rejection of these claims should be reversed.

D. The Rejection of the Claims Under 35  
U.S.C. § 102, in view of Pichereau

Claims 1, 3, 5, 9, 15, 19, 24 and 26 were finally rejected by the Examiner under 35 U.S.C. § 102(b), as being anticipated by Pichereau. Applicant/appellant respectfully submits that the Examiner's contention that Pichereau teaches or suggests every limitation of the claimed invention is clearly erroneous.

First, Pichereau fails to teach or suggest applicant/appellant's claimed "lid that may be fixably attached to [the] container top to seal [the] container CLOSED" (see claims 1 and 26). Rather, Pichereau's sponge-cup cover (shown in FIG. 2) includes a dipping-hole slot f such that a pen may be dipped in ink that is located within one of the inclined-bottom ink-troughs d (see Pichereau, column 3, lines 21-26). The dipping-hole slot f of the sponge-cup cover

clearly renders the sponge-cup cover incapable of sealing the inkstand CLOSED, and thus, Pichereau's inkstand is structurally different from the claimed invention.

Moreover, the Examiner's assertion, that "[e]ven if one compartment is open due to the presence of slot (f), the closing of three other compartments definitely meets the sealed closed requirement claimed" (final Action, page 8, lines 5-6), is without merit. It is well settled that the Examiner, when interpreting the words of a claim, must "[take] into account whatever enlightenment by way of definitions or otherwise that may be afforded by the written description contained in applicant/appellant's specification" (MPEP, page 2100-47). The Examiner has failed to do this. Applicant/appellant's invention is directed towards a food storage apparatus. Applicant/appellant's FIG. 1 shows a lid 50 capable of sealing an entire container 20 closed, and not just a portion thereof. Additionally, the specification as originally filed clearly explains that "[l]id 50, when used, covers container 20 in an airtight seal to keep food fresh and avoid freezer burn" (specification, page 11, lines 18-19). Pichereau simply does not disclose such a lid.

Furthermore, just because three of the ink troughs are closed, Pichereau does not suggest in any way they are sealed. In fact, Pichereau describes the top and bottom of

the ink stand as being formed of glass to ease moving the opening from trough to trough.

Second, the Examiner's assertion that a person skilled in the art of food preservation would read Pichereau and realize "here, I have found a new food storage device" is nonsense. The Examiner states that "[a]lthough lower part (j) fits like an axle in cup (a), there is nothing in the disclosure preventing the cup from holding a food item and still perform [sic] the act of receiving the lower part (j) and enabling rotation of the cover with the food item contained in the cup" (final Action, page 7, line 22 to page 8, line 2). Thus, the Examiner's argument is based on the concept of storing food in the central chamber of an inkstand. That central chamber, moreover, is intended to receive the lower part of the inkstand cover which "fits like an axle" (Pichereau, page 2, line 43). This concept would be eviscerated by placing food therein because any food placed in cup a would necessarily result in a separation between the sponge-cup cover rim and the tops of the ink troughs d (given that lower part j of Pichereau's sponge-cup cover will be prevented from being fully inserted into cup a). As such, Pichereau's sponge-cup cover would not be capable of properly resting on top of the inkstand, much less sealing any part of

the inkstand closed. This is clearly contrary to the claimed invention (see claims 1 and 26).

For at least these reasons, applicant/appellant respectfully submits that the Examiner's rejection of claims 1, 3, 5, 9, 15, 19, 24 and 26 in this section is clearly erroneous. Accordingly, applicant/appellant requests that the rejection under this section be reversed.

E. The Rejections of the  
Claims Under 35 U.S.C. § 103(a)

Claims 1-9, 13-17, 19-20, 24 and 26 were rejected by the Examiner under 35 U.S.C. § 103(a), as being obvious over some combination of Barhite, Dorney, Greiner, Hepburn, Morris 1, Morris 2, Oxley, and Wooster. Applicant/appellant respectfully submits that, for at least the following reasons, each of the rejections under this section are clearly erroneous.

In particular, applicant/appellant respectfully submits that each of the combinations of prior art suggested by the Examiner fails to teach or suggest every element of the claimed invention. As such, the rejections under this section are clearly erroneous. MPEP, page 2100-121 ("all the claim limitations" must be taught or suggested by the prior art reference or references when combined).

Additionally, each of the Examiner's rejections based on obviousness also fails for the reason that the cited prior art lacks the requisite suggestion or motivation to make the combinations set forth by the Examiner. MPEP, page 700-31 ("there must be some suggestion or motivation ... to modify the reference or to combine reference teachings). The only motivation to make the combinations suggested by the Examiner is applicant/appellant's specification. However, "[i]t is impermissible to use the claimed invention as an instruction manual or 'template' to piece together the teachings of the prior art so that the claimed invention is rendered obvious." In re Fritch, 972 F.2d 1260, 1266, 23 USPQ2d, 1780, 1784 (Fed. Cir. 1992); In re Dembiczak, 175 F.3d 994, 999, 50 USPQ2d 1614, 1617 (Fed. Cir. 1999) ("[c]ombining prior art references without evidence of such a suggestion, teaching, or motivation simply takes the inventor's disclosure as a blueprint for piecing together the prior art to defeat patentability -- the essence of hindsight"); In re Gorman, 933 F.2d 982, 987, 18 USPQ2d 1885, 1888 (Fed. Cir. 1991); In re Fine, 837 F.2d 1071, 1075, 5 USPQ2d 1596, 1600 (Fed. Cir. 1988) ("[o]ne cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention.").

Moreover, it should be noted that most of the references used by the Examiner in these combinations are from 88 to 122 years old, and that the Examiner has simply combined them with references disclosing a translucent or transparent outer wall, and called the combination obvious. This is contrary to well established case law, as well as the MPEP. In fact, the age of the cited references (and the fact that translucent surfaces have existed since the first of these patents issued, yet no one made the combinations suggested by the Examiner prior to reading applicant/appellant's specification) represents objective evidence of non-obviousness that must be considered when determining the patentability of the present invention. MPEP, page 2100-114 ([o]bjective evidence or secondary considerations such as ... long felt need ... are relevant to the issue of obviousness and must be considered in every case in which they are present" (emphasis added)).

The Rejection in Light  
of Barhite, Dorney and Greiner

Claims 1-6, 9, 13-17, 19-20, 24 and 26 were finally rejected under 35 U.S.C. § 103(a) as being unpatentable over Barhite in view of Dorney and Greiner. Applicant/appellant respectfully traverses the rejection.

In accordance with page 2100-121 of the MPEP, "the prior art reference (or references when combined) must teach or suggest all the claim limitations" (emphasis added) to establish a *prima facie* case of obviousness. The Examiner's proposed combinations of Barhite, Dorney and Greiner does not meet this standard because, even when combined, the cited references fail to teach or suggest all the claim limitations.

Barhite discloses a cream separator that includes an inner shell or milk-receptacle 10 and a surrounding shell or water-receptacle 14, into which cold water is introduced for the purpose of cooling the contents of milk-receptacle 10 (i.e., to produce cream). Barhite teaches that water-receptacle 14 is filled with cold water to cool the milk in the inner chamber so that cream is produced. This is directly contrary to applicant/appellant's claimed invention in which the channel is kept dry so that it can safely retain a label.

Barhite also fails to teach or suggest applicant/appellant's claimed "label support member" as found in claim 1. Barhite's stay(s) 28 are structural members used to support milk-receptacle 10 and water-receptacle 14 (so that the receptacles do not collapse if one is filled with liquid while the other is not). Stay(s) 28, however, is not the same structure as the claimed label support member that "prevents a label inserted into [the] label container area from falling to

the bottom of [the] channel" (see claim 1). In particular, stay 28 cannot completely separate the regions above and below it, such that a label inserted into water-receptacle 14 would not be able to fall to the bottom, because such a separation would preclude water-receptacle 14 from being filled with cold water. Accordingly, Barhite does not teach or suggest the claimed "label support member," nor does it teach or suggest the claimed "label container area that is in close proximity to said container top" (see claim 26). Moreover, neither Dorney nor Greiner teaches either of these limitations.

It should also be noted that Barhite cannot be combined as the Examiner has suggested because water-receptacle 14 is too wide to maintain the label in an orientation for viewing through a translucent outer wall. Moreover, if the walls were placed close enough together to support the orientation of the label, there would not be enough volume in the cooling chamber to function properly.

In addition, even if Barhite did show each of the claimed limitations except for a translucent outer wall, and it does not, applicant/appellant respectfully submits that the Examiner's rejections under 35 U.S.C. § 103 are also clearly erroneous because they lack the requisite motivation to combine.

The Examiner argues that "[t]here is no requirement that the primary reference must teach or suggest the modification for proper motivation to be present in a 103 obviousness rejection" (final Action, page 8, lines 21-22). While this is true, the Examiner must nevertheless show that something in the prior art, rather than applicant/appellant's specification, suggests the desirability of the combination. ACS Hosp. Sys. Inc. v. Montefiore Hosp., 732 F.2d 1572, 1577, 221 USPQ 929, 933 (Fed. Cir. 1994) ("the test for obviousness requires that the references, not the Examiner, provide teaching or suggestion supporting the combination of references offered" (emphasis added)). MPEP, page 2100-124 ("[t]he mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination"). Accordingly, in accordance with both the case law and the MPEP, a combination of references cannot be considered obvious simply because the references are able to be combined. Moreover, the fact is that Barhite teaches away from the combination suggested by the Examiner.

The Examiner's combination relies on another reference for a translucent outer wall. Barhite, however, discloses the use of a translucent gage 11 that is configured to show the level of contents of the inner receptacle.

Barhite is very careful to minimize the surface area exposed to radiation, so that thermal losses are minimized (see Barhite, page 1, lines 47-55). This, Barhite's teaching is that it is a bad thing for the outer wall to be translucent or transparent.

Put another way, the simplest thing for Barhite to do was to have transparent inner and outer walls. Because the cooling substance was water, the level of the milk would have been apparent to the user, and the cream-separator could have been constructed in a simpler, less expensive manner. The problem, however, would be the exposure of the milk to radiation from light passing through the transparent walls which would negatively affect the ability to separate cream from the milk.\* Thus, the Examiner's proposed combination is clearly erroneous because it is directly contrary to the teachings of the primary reference.

For at least the above reasons, applicant/appellant respectfully submits that the rejection of the claims under this section is clearly erroneous, and should be reversed.

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\* The Examiner's assertion that "[h]eat radiation from light is minimal and generally would have a negligible effect on warming the compartment" (final Action, page 9, lines 2-3) is not only contradicted by the teachings of Barhite, it is completely unsupported in violation of the MPEP. "[W]hen an Examiner relies on scientific theory, evidentiary support for the existence and meaning of that theory must be provided" (MPEP, page 2100-128).

The Rejection in Light  
of Wooster, Dorney and Greiner

Claims 1-6, 9, 13, 15, 20, 24 and 26 were also finally rejected under 35 U.S.C. § 103(a), as being unpatentable over Wooster in view of Dorney and Greiner. Applicant/appellant respectfully traverses the rejection.

The Examiner's position regarding Wooster is the same as it was with respect to Barhite. In particular, the Examiner contends that "Wooster discloses the invention except for the translucent/transparent outer wall" (final Action, page 4, line 3). Applicant/appellant respectfully submits that the Examiner's rejection is clearly erroneous because Wooster fails to teach or suggest other claimed limitations as well so that, even in combination with the outer wall of either Dorney or Greiner, the combination fails to teach or suggest all of the claimed elements.

Wooster's milk cooler includes an elongated milk-receptacle F placed inside an ice-receptacle G, into which ice and cold water is introduced to cool the milk to extract cream. Additionally, a cover I is on top of milk-receptacle F that includes perforations f to allow air (which has been purified by a porous material) to enter milk-receptacle F.

Wooster, like Barhite, fails to teach or suggest applicant/appellant's claimed label support member or label

container area. For example, placing a label within Wooster's ice-receptacle G (the Examiner's equivalent of applicant/appellant's label container area) would result in the destruction of any such label because ice-receptacle G is a receptacle for ice and cold water. Moreover, the label either would not stand up and be impossible to read, or the walls in ice-receptacle G would have to be so close together, the chamber would not be able to store ice to cool the milk. Thus, just as set forth above with respect to Barhite, the proposed modification of Wooster (i.e., replacing ice-receptacle with a dry label container area) would eviscerate the essence of Wooster's invention. Moreover, the Examiner's combinations with Wooster all fail to teach or suggest applicant/appellant's claimed "lid that may be fixably attached to said container top to seal said container CLOSED" (see claims 1 and 26). Wooster, in fact, teaches exactly the opposite because Wooster's hinged lid B includes perforations f that prohibit the milk cooler from being sealed closed (see Wooster, page 1, lines 59-71).

In addition, even if the combination of Wooster, Dorney and Greiner did show each element of the claimed invention, and it does not, the Examiner's proposed combination is clearly erroneous because the cited prior art fails to provide the requisite motivation to make the

combination suggested by the Examiner (i.e., to modify Wooster's outer wall). Absent such a suggestion, it is improper to classify this type of modification as obvious. In re Kotzab, 217 F.3d 1365, 1370, 55 USPQ2d 1313, 1316 (Fed. Cir. 2000) ("identification in the prior art of each individual part claimed is insufficient ... there must be some motivation, suggestion or teaching of the desirability of making the specific combination that was made by the applicant"). In particular, there is no suggestion anywhere in the cited prior art to replace the outer wall of Wooster, which is "preferably made of wood" (Wooster, column 1, lines 21-22), with a translucent or transparent material. Rather, as in the case of Barhite, such a modification would subject the central chamber of Wooster to undesirable radiation that could significantly reduce the effectiveness of Wooster's apparatus (thus teaching away from Wooster).

The Examiner's motivation to modify Wooster's wooden walls "to be translucent or transparent in order to see an item placed within the space between the inner and outer walls of a container" (final Action, page 4, lines 6-7) is nothing more than an impermissible Examiner-based motivation. No one skilled in the art would look at Wooster and come up with the idea for transparent walls. As such, this motivation should be rejected.

In light of the above, applicant/appellant respectfully submits that the Examiner's rejection of the claims in this section is clearly erroneous, and therefore respectfully requests that the rejection be reversed.

The Rejection in Light  
of Oxley and Wooster

Claims 1-6, 9, 13, 15, 19-20 and 24 were finally rejected by the Examiner under 35 U.S.C. § 103(a), as being unpatentable over Oxley in view of Wooster.

The Examiner admitted that Oxley lacks the claimed "label support member" and the claimed "fixed geometric relationship" (final Action, page 4, lines 12-14). The Examiner stated that "[i]t would have been obvious to modify Oxley to have direct connections" similar to the "fillet weld shown in the cross section of Fig. 2" of Wooster, because of "a need to have parts that can't be disassembled easily" (final Action, page 4, lines 16-18). This motivation, however, is simply a fiction created by the Examiner and not shown or suggested by any of the references. As explained above, "the test for obviousness requires that the references, not the Examiner, provide teaching or suggestion supporting the combination of references offered." ACS Hosp. Sys. Inc. v. Montefiore Hosp., 732 F.2d 1572, 1577, 221 USPQ 929, 933 (Fed. Cir. 1994).

Moreover, the modification proposed by the Examiner, i.e., welding pieces together, completely eviscerates Oxley's invention because it requires removing one or more display shelves and destroying the ability of partition F to be adjusted depending on how many items are to be displayed.

In addition, for all of the reasons discussed above with respect to Oxley and Wooster, the combination of these references still does not teach all of the elements of applicant/appellant's claimed invention.

For at least the above reasons, applicant/appellant respectfully submits that the combination of prior art suggested by the Examiner is clearly erroneous and that the rejection under this section should therefore be reversed.

The Rejections in Light of  
Barhite, Dorney and Greiner, Hepburn,  
Morris 1, Morris 2, Oxley and Wooster

Finally, the Examiner rejected claims 7, 8, 14, 16 and 17 over various combinations of Barhite, Dorney, Greiner, Hepburn, Morris 1, Morris 2, Oxley and Wooster. Applicant/appellant respectfully traverses each of these rejections.

The rejection of claims 7, 8 and 14 over Wooster in view of Dorney, Greiner and Hepburn is clearly erroneous for the reasons set forth above. In particular, the combination of Wooster, Dorney, Greiner and Hepburn does not teach or

suggest applicant/appellant's claimed "label support member" or "label container area" (see claim 1).

Moreover, the Examiner's alleged motivation -- to increase the insulation value to prevent food spoilage -- makes no sense. Wooster describes a device that is used to cool milk so that cream may be separated from the milk. It is not a food storage unit. There is no issue with food spoilage. Milk is put in. Once the cream has risen to the top, the milk and cream are withdrawn. Thus, the motivation to combine comes, once again, from the Examiner.

For at least the above reasons, this rejection of claims 7, 8 and 14 is clearly erroneous and should be reversed.

Claims 7, 8 and 14 were also rejected as obvious over either of the Morris patents in view of Hepburn. Applicant/appellant respectfully traverses this rejection.

As discussed above, neither of the Morris patents show or suggests the storage of food. The devices disclosed in those patents are intended to be used to display advertising. Accordingly, the Examiner's proposed motivation "to prevent food spoilage" (final Action, page 5, line 22) is clearly erroneous.

For at least the above reasons, this rejection of claims 7, 8 and 14 is clearly erroneous and should be reversed.

Claim 14 was rejected as obvious in view of Oxley or Oxley in view of Wooster. Applicant/appellant respectfully traverses this rejection.

As stated above, the Examiner admits that Oxley doesn't show applicant/appellant's claimed "label support member" or the "fixed geometric relationship." Therefore, the obviousness rejection based on Oxley alone is clearly erroneous.

Wooster, as set forth above, also fails to disclose the same elements. Moreover, as also set forth above, there is no motivation or suggestion to combine Oxley and Wooster as proposed by the Examiner.

For at least the above reasons, the rejection of claim 14 is clearly erroneous and should be reversed.

Claims 16 and 17 were also rejected as being obvious over either of the Morris patents in view of Barhite. Applicant/appellant respectfully traverses this rejection.

As set forth above, the Morris patents are not food storage devices. The Examiner's motivation for this combination -- to provide a tighter connection between the lid and container -- is baseless. It simply does not matter how

tight the connection is because there is no issue with spoilage. In addition, both Morris patents describe how a "long threaded rod" is used to secure the assembly of the device (see Morris 1 at column 2, lines 46-47 and Morris 2 at column 3, line 35). This is further evidence of the inapplicability of the Examiner's combination.

For at least the above reasons, the rejection of claims 16 and 17 is clearly erroneous and should be reversed.

IX. CONCLUSION

For the reasons set forth above, applicant/appellant respectfully submits that this application is in condition for allowance. The Examiner's rejections should be reversed.

Respectfully submitted,



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Agent for Applicant/Appellant

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APPENDIX A  
CLAIMS ON APPEAL

1. A food storage unit, comprising:

a container comprising a container top, a container bottom, an inner wall and an outer wall having a fixed geometric relationship, said inner and outer walls forming a channel there between, said channel including a label container area that is accessible by a user for the insertion of a label therein, at least a portion of said outer wall being translucent such that a label placed in said label container area may be read without being removed from said food storage unit;

at least one label support member that is located within said channel and is physically attached to said inner and outer walls, said label support member that prevents a label inserted into said label container area from falling to the bottom of said channel; and

a lid that may be fixably attached to said container top to seal said container CLOSED.

2. The food storage unit of claim 1, wherein said label support member is positioned parallel to said lid between said inner wall and said outer wall.

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3. The food storage unit of claim 1, wherein only one side of said channel is accessible by said user for said insertion of said label.

4. The food storage unit of claim 1, wherein said label support member is positioned on one side of said container parallel to said lid between said inner wall and said outer wall, said label support member that provides a surface that a label would rest upon after being inserted into said label container area.

5. The food storage unit of claim 1, wherein said channel includes a portion that is inaccessible by said user, said container further comprising:

an insulating material located within said inaccessible portion of said channel.

6. The food storage unit of claim 5, wherein said label support member is positioned parallel to said lid between said inner wall and said outer wall, at least a portion of said insulating material being positioned below said label support member.

7. The food storage unit of claim 5, wherein said insulating material is polystyrene foam.

8. The food storage unit of claim 5, wherein said insulating material is plastic.

9. The food storage unit of claim 1, wherein said container further comprises:

support structure located between said inner wall and said outer wall that provides additional rigidity to said container.

13. The food storage unit of claim 9, wherein said label support member is positioned parallel to said lid between said inner wall and said outer wall, said label support member which renders a portion of space between said inner and outer wall inaccessible to said user, said container further comprising:

an insulating material located within said inaccessible portion of space.

14. The food storage unit of claim 1, wherein said outer wall is smaller in dimension at said container bottom than at said container top.

15. The food storage unit of claim 1, wherein said outer wall of said label container area comprises a translucent material.

16. The food storage unit of claim 1, wherein said lid further comprises a ridge that is insertable in between said inner wall and said outer wall.

17. The food storage unit of claim 16, wherein said ridge and said channel form a substantially airtight seal when mated together.

19. The food storage unit of claim 1, wherein said lid further comprises an opening-assistance tab.

20. The food storage unit of claim 1, wherein said container bottom further comprises a unified bottom structure that comprises a single wall.

24. The food storage unit of claim 1, wherein said lid comprises:

stacking support structure that may be engaged with a container bottom of another food storage unit to hold

said food storage unit and said another food storage unit in alignment relative to each other.

26. A food storage unit, comprising:

a container comprising a container top, a container bottom, an inner wall and an outer wall having a fixed geometric relationship, said inner and outer walls forming a channel there between, said channel including a label container area that is in close proximity to said container top, said label container area that is accessible by a user for the insertion of a label therein, at least a portion of said outer wall being translucent such that a label placed in said label container area may be read without being removed from said food storage unit; and

a lid that may be fixably attached to said container top to seal said container CLOSED.

APPENDIX B

COPY OF JUNE 5, 2003 FINAL OFFICE ACTION



# UNITED STATES PATENT AND TRADEMARK OFFICE

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/844,627	04/27/2001	Nancy A. Abbe	ABBE/001	2399

1473 7590 06/05/2003  
FISH & NEAVE  
1251 AVENUE OF THE AMERICAS  
50TH FLOOR  
NEW YORK, NY 10020-1105

EXAMINER
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CASTELLANO, STEPHEN J.

ART UNIT	PAPER NUMBER
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3727

DATE MAILED: 06/05/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/844,627

Applicant(s)

ABBE, NANCY A.

Examiner

Stephen J. Castellano

Art Unit

3727

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-9, 13-17, 19, 20, 24 and 26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9, 13-17, 19, 20, 24 and 26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: .

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The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-9, 13-17, 19, 20, 24 and 26 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Claim 1 states that a portion of the outer wall is translucent in line 8. Translucent is defined as transmitting light but causing sufficient diffusion to prevent perception of distinct images. In lines 8 and 9 of claim 1, it is stated that a label placed in the label area may be read (through the outer wall). This doesn't seem possible since the translucence of the outer wall would distort the image to prevent perception. Claim 26 has similar claim language. Changing the word "translucent" to "transparent" would eliminate this rejection.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-6, 9, 13, 15, 19, 20 and 24 are rejected under 35 U.S.C. 102(b) as being anticipated by Oxley.

Oxley discloses a food storage unit comprising a container with an inner wall (backing partition F) and an outer translucent/transparent wall (window E) having a fixed geometric relationship when assembled (the inner and outer walls don't move with respect to each other unless the user intentionally wants to disassemble the unit), the inner and outer walls forming a

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channel (the inner surface of the outer wall and the outer surface of the inner wall forming side walls of the channel and the upper surface of either the bottom of the box (D) or the lower shelf (A) forming the bottom of the channel) there between, the channel includes a label container area that is accessible by a user for the insertion of a label (article C) therein, at least one label support member [either of the two lower shelves (A)] that is located within the channel and is physically attached to the inner and outer walls since the box (D) and window (E) seem to be press fit with backing partition (F) and shelves (A), and a top lid.

Claims 1-6, 9, 13, 15, 20, 24 and 26 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Morris ('059)(Morris 1) and Morris ('151)(Morris 2).

Claims 1, 3, 5, 9, 15, 19, 24 and 26 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Pichereau.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-6, 9, 13-17, 19, 20, 24 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Barhite in view of Dorney and Greiner ('918)(Greiner).

Barhite discloses the invention except for the translucent/transparent outer wall. Dorney discloses a double wall cup having an outer wall of translucent material. Greiner discloses a double wall bowl with an outer transparent wall. It would have been obvious to modify the material of the outer wall of Barhite to be either translucent or transparent in order to see an item placed within the space between the inner and outer walls of a container.

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Claims 1-6, 9, 13, 15, 20, 24 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wooster in view of Dorney and Greiner ('918)(Greiner).

Wooster discloses the invention except for the translucent/transparent outer wall. Dorney discloses a double wall cup having an outer wall of translucent material. Greiner discloses a double wall bowl with an outer transparent wall. It would have been obvious to modify the material of the outer wall of Wooster to be translucent or transparent in order to see an item placed within the space between the inner and outer walls of a container.

Claims 1-6, 9, 13, 15, 19, 20 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oxley in view of Wooster.

This rejection is made if it is deemed that Oxley doesn't anticipate claims 1-6, 9, 13, 15, 19, 20 and 24.

Oxley discloses the invention except for the label support member being physically attached by a direct connection to the inner and outer walls of the container and the fixed geometric relationship. Wooster teaches direct connection of the label support member to the outer wall because the L-shaped cross section of part G forms both the outer wall and the label support member and by a direct connection to the inner wall (F) by a fillet weld shown in the cross section of Fig. 2. It would have been obvious to modify Oxley to have direct connections of similar form as motivated by a need to have parts that can't be disassembled easily. The direct connections would provide the fixed geometric relationship and physical attachment required by the claims. It would have been obvious to remove the uppermost shelf (A) or the two upper shelves (A) in order to provide access by another means since the direct connections such as welds and adjacent parts being formed as one piece do not make access as easy.

Claims 7, 8 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wooster in view of Dorney and Greiner as applied to claims 1 and 5 above, and further in view of Hepburn.

The combination discloses the invention except for expanded polystyrene in the inaccessible portion of the channel and the outer wall being smaller in dimension at the bottom than at the top. Hepburn discloses in Fig. 5 and 6 a cooler wherein the inner and outer walls define a channel there between with expanded polystyrene located in a lower region of the cooler, the outer wall is tapered to be more narrow at the bottom. It would have been obvious to add expanded polystyrene in order to increase the insulation value to prevent food spoilage. It would have been obvious to taper the walls in order to nest the containers to form a more compact way to store a series of empty containers. Also, no criticality is associated with the slight dimensional change shown by the drawings of the present invention. It would have been obvious by design choice to slightly vary dimensions of the container so that the outer wall is slightly smaller in dimension at the bottom than at the top.

Claims 7, 8 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Morris 1 or Morris 2 in view of Hepburn.

Morris 1 and Morris 2 both discloses the invention except for expanded polystyrene in the inaccessible portion of the channel and the outer wall being smaller in dimension at the bottom than at the top. Hepburn discloses in Fig. 5 and 6 a cooler wherein the inner and outer walls define a channel there between with expanded polystyrene located in a lower region of the cooler, the outer wall is tapered to be more narrow at the bottom. It would have been obvious to add expanded polystyrene in order to increase the insulation value to prevent food spoilage. It

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would have been obvious to taper the walls in order to nest the containers to form a more compact way to store a series of empty containers. Also, no criticality is associated with the slight dimensional change shown by the drawings of the present invention. It would have been obvious by design choice to slightly vary dimensions of the container so that the outer wall is slightly smaller in dimension at the bottom than at the top.

Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Oxley or Oxley in view of Wooster.

Oxley discloses the invention except for the outer wall being smaller in dimension at the bottom than at the top. No criticality is associated with the slight dimensional change shown by the drawings of the present invention. It would have been obvious by design choice to slightly vary dimensions of the container so that the outer wall is slightly smaller in dimension at the bottom than at the top.

Claims 16 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Morris 1 or Morris 2 in view of Barhite.

Morris 1 and Morris 2 disclose the invention except for the lid ridge. Barhite teaches a lid ridge. It would have been obvious to add the lid ridge to provide a tighter connection between the lid and the container.

Applicant's arguments filed April 21, 2003 have been fully considered but they are not persuasive.

Applicant traverses the 112, first paragraph rejection. The examiner's definition of translucent is provided by the American Heritage Dictionary of the English Language, Third Edition copyright ©1992 by Houghton Mifflin Company. Applicant's usage of translucent to

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represent a material that when viewed through objects appear clearly visible is repugnant to the well known meaning of the term "translucent."

Applicant traverses the Oxley anticipatory rejection. Oxley provides a label as article (C) and a lid as shown in Fig. 1 and 2 in a position sealing the box in a closed configuration.

Applicant states that the inner and outer walls do not have a fixed geometric relationship because the backing partition F is removed to access the display area between the partition F and window E. It is certainly true that Oxley operates in this manner, but the claim limitation of a fixed geometric relationship is not precluded by removable parts that may remain indefinitely in their fixed relationship once assembled. Applicant further states that the label support member is not physically attached to the inner and outer walls. It seems that the partition F and shelves A are press fit into position and that such a strong connection provides the physically attached limitation required by the claims. The removability of a part doesn't preclude the fact that a part has a physical attachment.

Applicant traverse the anticipatory rejection of both Morris 1 and Morris 2. Both references disclose food storing. Applicant suggests that the inner walls are removable to gain access to the support sections 41. Even though portions of the device are removable, this alone doesn't preclude the fixed relationship the parts will have once assembled. The press fitting connections of the parts provide the physical attachment required by the claims.

Applicant also traverses the Pichereau anticipatory rejection. Reference sign (a) designates an opening of the central cup. Applicant's conclusion that neither food, ink or anything else may be placed or stored inside the central cup while the sponge-cup cover is being used is faulty. Although lower part (j) fits like an axle in cup (a), there is nothing in the

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disclosure preventing the cup from holding a food item and still perform the act of receiving the lower part (j) and enabling rotation of the cover with the food item contained in the cup. More importantly, nothing precludes the central cup from holding a food item when the cover is removed. Applicant further submits that the cover is not capable of sealing the inkstand in a closed configuration. Even if one compartment is open due to the presence of slot (f), the closing of three other compartments definitely meets the sealed closed requirement claimed.

In response to any argument that applicant sets forth wherein a liquid in the label container area prevents viewing or somehow destroys the label, the examiner submits that the rejection is based upon the container being in a state wherein the label container area is free of liquid such as after the container is formed but before the container is filled with the designated liquid. In cases where the liquid is water, the label can be viewed through the transparent water. In cases where the liquid may not be readily transparent, the label could be situated sufficiently close to the outer wall such that the liquid doesn't interfere with viewing the label. A label may be made of a wide variety of materials which could dissolve in any given liquid. The composition of the label of the invention is not sufficiently claimed such that someone could definitely state that the label is destroyed by a liquid. Water is substantially chemically non-reactive such that paper or plastic or metallic labels do not readily dissolve in water.

Applicant traverses the Barhite in view of Dorney and Greiner rejection. Applicant suggests that if a label were placed within compartment 14 of Barhite, it would be destroyed. Compartment 14 is free of water as shown by Fig. 14. Applicant states that Barhite doesn't suggest the modification. There is no requirement that the primary reference must teach or suggest the modification for proper motivation to be present in a 103 obviousness rejection.

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Applicant submits that the modification of a translucent or transparent wall would destroy the intended purpose of Barhite since (heat) radiation is undesirable. Heat radiation from light is minimal and generally would have a negligible effect on warming the compartment.

Applicant traverses the Wooster in view of Dorney and Greiner rejection for nearly identical reasons as for Barhite in view of Dorney and Greiner. There is no mention of the undesirability of radiation in Wooster.


**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

In order to reduce pendency and avoid potential delays, Group 3720 is encouraging FAXing of responses to Office Actions directly into the Group at (703) 872-9302. This practice may be used for filing papers not requiring a fee. It may also be used for filing papers which require a fee by applicants who authorize charges to a PTO deposit account. Please identify the examiner and art unit at the top of your cover sheet. Papers submitted via FAX into Group 3720 will be promptly forwarded to the examiner.

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Any inquiry concerning this communication of earlier communications from the examiner should be directed to Stephen J. Castellano whose telephone number is (703) 308-1035.

  
Stephen Castellano  
Primary Examiner  
Art Unit 3727

June 3, 2003



APPENDIX C  
COPY OF REFERENCES

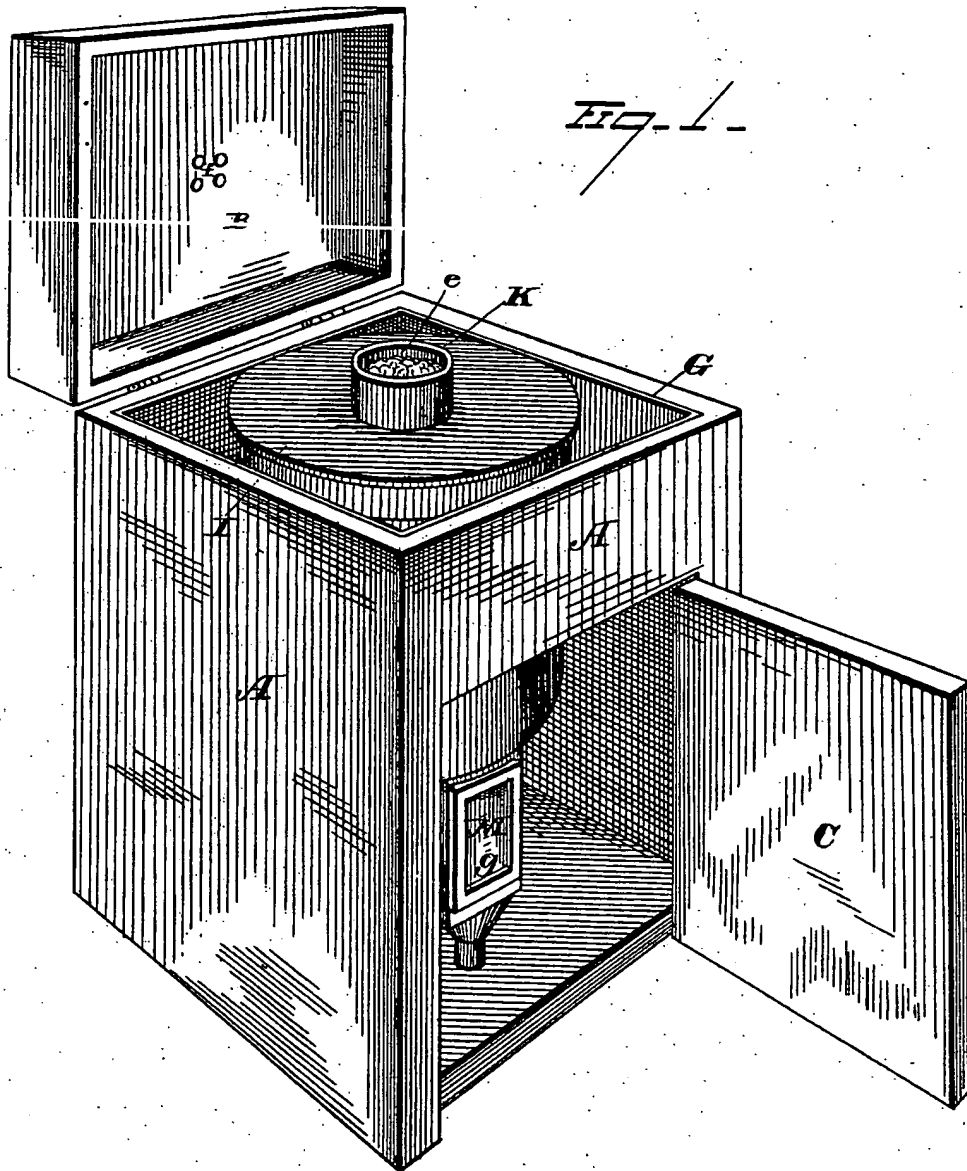
(No Model.)

D. B. WOOSTER.  
Milk Cooler.

3 Sheets—Sheet 1.

No. 242,805.

Patented June 14, 1881.



WITNESSES

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*Herman Moran*

INVENTOR

*D. B. Wooster*  
*R. H. Seymour*  
ATTORNEY

H. PETERS, Photo-Lithographer, Washington, D. C.

Express Mail Number  
EV242440406US

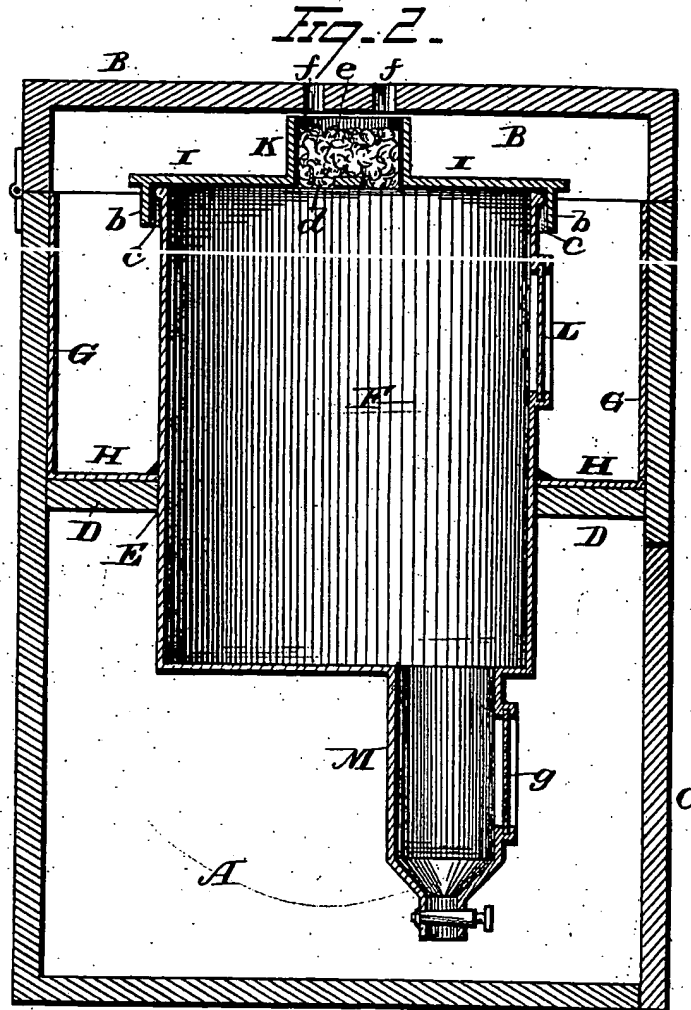
(No Model.)

3 Sheets—Sheet 2.

D. B. WOOSTER.  
Milk Cooler.

No. 242,805.

Patented June 14, 1881.



WITNESSES

*E. H. Nottingham*  
*Herman Moran*

INVENTOR

*D. B. Wooster*  
*B. H. Symon*  
ATTORNEY

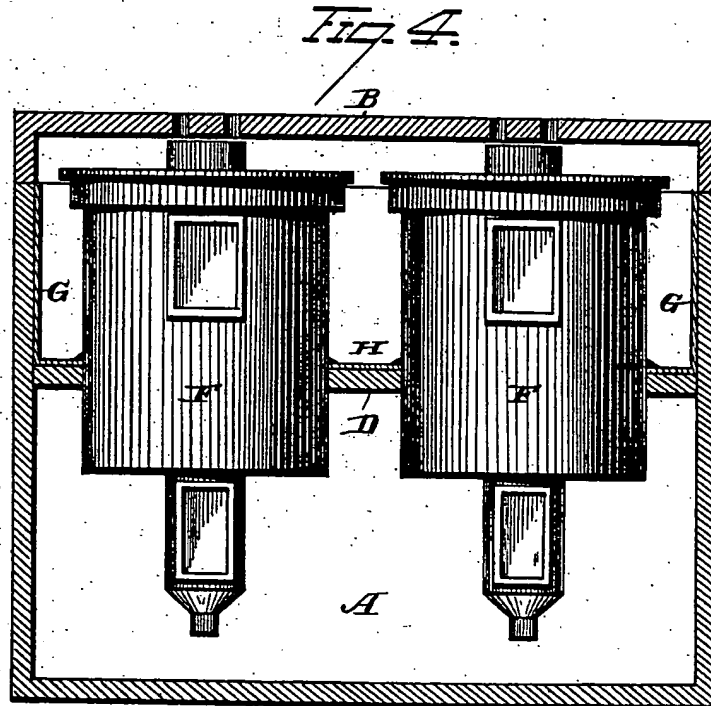
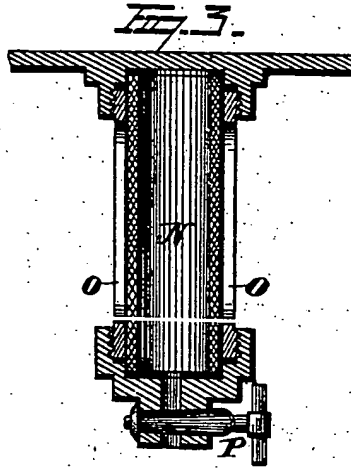
(No Model.)

D. B. WOOSTER.  
Milk Cooler.

8 Sheets—Sheet 3.

No. 242,805.

Patented June 14, 1881.



WITNESSES

*E. De Vottingham*  
*Herman Moran*

INVENTOR

*D. B. Wooster*  
*B. H. Seymour*  
ATTORNEY

# UNITED STATES PATENT OFFICE.

DANIEL B. WOOSTER, OF MARSHFIELD, VERMONT.

## MILK-COOLER.

SPECIFICATION forming part of Letters Patent No. 242,805, dated June 14, 1881.

Application filed May 3, 1881. (No model.)

*To all whom it may concern:*

Be it known that I, DANIEL B. WOOSTER, of Marshfield, in the county of Washington and State of Vermont, have invented certain new and useful Improvements in Milk-Coolers; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to an improvement in apparatus for cooling milk.

In the accompanying drawings, Figure 1 is a view, in perspective, of my improved milk-cooler. Fig. 2 is a vertical section of the same. Fig. 3 represents a modification of the transparent eduction-tube. Fig. 4 is a modified form of cabinet, showing its adaptation for the reception of two or more milk-receptacles.

A represents a box or cabinet, preferably made of wood, and provided with a hinged lid, B, and a swinging or sliding door, C. A partition, D, having a central perforation, E, is secured within the cabinet.

F represents an elongated milk-receptacle, the upper portion of which extends above partition D, and the lower portion depends below the same.

G is a sheet-metal ice-receptacle, the upper edges of which are secured to the upper edges of the cabinet, and its bottom H is supported upon the partition D. The central portion of the sheet-metal bottom H is cut away to correspond to the outer configuration of the milk-receptacle, which latter is attached thereto in a water-tight manner.

From the above it will be observed that a water-tight ice-receptacle is formed within the cabinet around the upper end only of the milk-receptacle.

The top *a* of the milk-receptacle F extends slightly above the top of the body of the cabinet, or the upper edge of the ice-receptacle, so that should cold water be poured into the ice-receptacle and the latter completely filled the water is prevented from entering the milk-receptacle F.

A cover, I, provided with a downwardly-projecting flange, *b*, is secured to the top of the milk-receptacle. The flange *b* does not fit

the periphery of the milk-receptacle snugly, an open space, *c*, between the same being formed. As the water rises in the ice-box it will form a liquid seal between the cover and the milk-receptacle, and thus prevent any admission or escape of air between such parts of the apparatus.

To the top of cover I is secured a curb or ring, K, having a perforated bottom, *d*, and within said curb or ring is placed loosely a filling, *e*, of cotton or other porous material. The hinged lid B is provided with perforations *f*, which register with the ventilating-ring K. By means of this construction and arrangement of parts the air is allowed to enter through the perforations in the lid, pass through the porous packing, and into the milk-receptacle, the porous material serving to purify the air by filtering all germs of impurity therefrom before it comes in contact with the milk.

L is a transparent gage or port located in the upper portion of the milk-receptacle, and serves to admit of the ready inspection of the milk for the purpose of ascertaining whether or not all the cream has risen to the surface of the milk. If desired, another similar port may be provided in the lower portion of the milk-receptacle.

To the lower end of receptacle F is attached a transparent tube, M, having a stop-cock or spigot connected with its lower end. The tube M is comparatively small relative to the size of the milk-receptacle, and enables all the milk to be drawn off without allowing the escape of the cream therewith.

Heretofore the lower ends of milk-coolers have been provided with transparent cream-gages; but when such gages are attached to the milk-receptacle itself it is found very difficult, if not impossible, to accurately separate the milk from the cream. By forming a transparent cream-gage in the small eduction-tube all the milk can be drawn off before the cream makes its appearance, and then the spigot is closed and the cream drawn off in a separate vessel.

In Fig. 1 the eduction-tube is represented as being provided with a section, *g*, of glass to allow the ready inspection of the cream. Instead of such construction that illustrated in Fig. 3 may be employed in lieu thereof.

In Fig. 3, N is a glass tube, and O an open-work casing, one end of which is attached to the milk-receptacle, while the other end is provided with any suitable valve or spigot, P.

I have shown my invention in Fig. 1 as consisting of a single milk-receptacle; but the cabinet may be of any desired size, and any number of milk-receptacles placed therein, as shown in Fig. 4; and therefore I would have it understood that I do not limit myself to any particular number of milk-receptacles that may be arranged within a suitably-constructed cabinet. Again, the milk-receptacle and cabinet may be of any desired form, either round, square, or rectangular, as my invention is not confined to any particular shape of apparatus.

When ice or cold water is placed in its receptacle around the upper end of the milk-receptacle the milk in the upper portion of the vessel is reduced in temperature, and the cream contained therein is separated in whole or in part. The cold milk then descends, and its place is supplied by a current of warmer milk ascending from the lower end of the milk-receptacle. The cooling of the milk continues, and the cream is separated therefrom. This action of the milk is constant, there being a constant downward current of cold milk and an upward current of warmer milk, which latter, when it reaches the top of the milk-receptacle, is reduced in temperature and parts with its cream. This action of milk insures a speedy rising of the cream, as every particle of the

contained milk is subjected to a continuous reduction of temperature.

The ice-box is provided, or may be provided, with suitable inlet and outlet pipes for running water, to insure a constant stream of pure cold water in direct contact with the milk-receptacle.

I make no broad claims in this patent to the many essential and broad features of improvement embodied in the apparatus shown and described, as such broad claims are embraced in my application filed January 17, 1879.

Having fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

The combination, with a cabinet or box furnished with a separate water-tight ice-receptacle, and a lid to cover the cabinet and ice-receptacle, of a vertically-elongated milk-receptacle passing centrally through the bottom of the ice-receptacle, so that the upper portion will be inclosed within the ice-receptacle, and the lower end project below the same, and a ventilated cover fitting upon the top of said milk-receptacle, substantially as set forth.

In testimony that I claim the foregoing I have hereunto set my hand and seal this 27th day of April, 1881.

DANIEL B. WOOSTER. [L. S.]

Witnesses:

E. M. WOOSTER,  
DANIEL R. LOVELAND.

(No Model.)

A. P. PICHEREAU.  
INKSTAND.

No. 417,082.

Patented Dec. 10, 1889.

Fig. 2

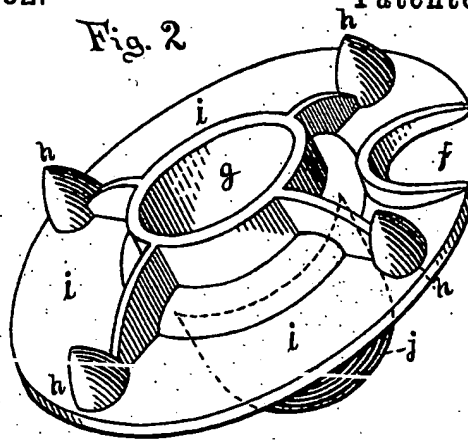
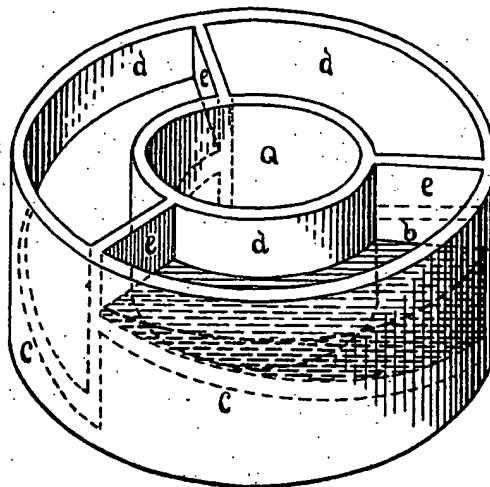


Fig. 1



Witnesses:

Frank L. Andrews, Asahel P. Pichereau,  
J. A. Barrett.

Inventor.

H. PETERS, Photo-Lithographer, Washington, D. C.

Express Mail Number  
EV242440406US

# UNITED STATES PATENT OFFICE.

ASAHEL P. PICHEREAU, OF GALESBURG, ILLINOIS.

## INKSTAND:

SPECIFICATION forming part of Letters Patent No. 417,082, dated December 10, 1889.

Application filed September 10, 1889. Serial No. 323,564. (No model.)

*To all whom it may concern:*

Be it known that I, ASAHEL P. PICHEREAU, a citizen of the United States, residing at Galesburg, in the county of Knox and State of Illinois, have invented certain new and valuable Improvements in Inkstands, of which the following is a specification.

I am well aware that many contrivances and combinations have been invented for the purpose of improving on the old ways of building inkstands, and my own invention, patented March 20, 1888, No. 379,906, is at present fresh in mind, it having in it the leading principles that will be set forth and appear in this specification; but as I have spent much labor and money experimenting, developing, and bringing into practical use the aforesaid patent, during which time I have added and brought into practical working order several improvements on the aforesaid patent, therefore, in order that I may secure unto myself what is rightfully due me, I apply for Letters Patent, and ask that the same be granted on my new and useful improvements.

The new and useful improvements in my invention are the several inclined-bottom ink-troughs about a central cup, which central cup is made much lower than in my patent of 1888 aforesaid, and is to be the receptacle into which the lower part of the sponge-cup is to fit, while a rim about said sponge-cup covers said ink-troughs and a slot in the outer edge of said rim provides a dipping-hole, said rim resting on the top of said troughs, while the lower part of said sponge-cup, fitting as an axle into said central cup, which is surrounded by the aforesaid troughs, can be moved around on said troughs, so that the said slot may be over any trough or any part of a trough. In the left end of a trough the ink may be shallow and in the right deep, caused by the inclined bottom, and such being the condition the writer may acquire the habit of touching the pen on the bottom of the ink-trough when dipping the pen, and by placing said slot above the required depth at every dipping he may get just the required amount of fluid.

In my improvements in inkstands, No. 379,906, March 20, 1888, above mentioned, I

used but one ink-trough to illustrate the inclined-bottom ink-trough principle, with a revolving sliding cover. In said revolving sliding cover I used a hole in its rim for the dipping-hole instead of a slot, as I do in my improvements as illustrated by the accompanying drawings. The hole in said rim has proven to be in almost every event too small, for when the pen with very thin ink would be rubbed against its sides it would cause much ink to adhere to said sides, and it would then find its way to and about its rim-covering and make a bad daubing mess underneath. The slot is large in said rim and so as to prevent the ink from rubbing off the pen when dipped.

Although I used but one ink-trough in the aforesaid improvements in inkstands of the year 1888, yet, as I find by experiment that the bottom part of my inkstand can be more easily made of glass with several troughs, and as it is probably more useful when so made, I have concluded that it is best to construct these bottoms with these several troughs, and if the person using the stand only wishes but one kind of ink he may place in the other troughs some small articles, as pens, stamps, or pins, and when the inkstand is not in use and any trough does not contain ink the dipping-hole slot should be placed above such a trough. In this my late construction of the cover and sponge-cup of my improvements in inkstands I have made them out of glass, and have combined the sponge-cup, ink-trough, cover, &c., so that the whole is molded and fashioned into but one piece of glass. This makes the cost less in manufacturing, and also affords a really better cover for the ink-troughs, and makes the sponge-cup more convenient and useful. By experimenting I have come to the conclusion that it is better to construct both parts—bottom and combination-cover of this my improvement in inkstands—out of crystal flint glass, although other material may be used and can be used. The bottom, although hard to form, can be wrought by the molder into one piece of glass, and as there is no corroding, rusting, &c., when the entire inkstand, both bottom and combination-cover, is constructed of glass, and as that material seems

to be both best and cheapest, it has been most used in the construction of this my late invention and improvements in inkstands. The slot in the outer part of the rim-cover is to be so constructed as to have about its upper border a collar, so as to be a guide to the pen, and so prevent ink from accumulating on top of the cover, caused by a careless use of the pen about the dipping-hole.

In the accompanying drawings, Figure 1 represents the bottom, and Fig. 2 the combination cover, of my invention and improvements in inkstands.

Letter *a*, Fig. 1, is at the opening of the central cup, and about it are shown three ink-troughs *d d d*, in one of which troughs below *b* is shown a quantity of ink. Partitions *eee* represent divisions between said three ink-troughs, while *c c* show the incline of the bottoms of these troughs.

In Fig. 2, letter *g* represents the opening of the sponge-cup, while *j* shows its lower and outside. *f* designates the dipping-hole slot in the outer rim of the cover, while *i i i* show the part of the cover that is to cover the ink in the ink-troughs *d d d*, Fig. 1.

Letters *h h h h*, Fig. 2, indicate the cones of a pen-holder rack on the combined cover. It is made by joining the said cones to the upper part of the sponge-cup by what may be called "braces," affording support for the pen-holder when it is placed on these braces behind two of the cones.

In using this improved inkstand place the combination-cover, Fig. 2, over on the bottom, Fig. 1, so that the lower part *j* of the sponge-cup will fit into cup *a*, and so that that part of the cover *i i i* will fit close down on the upper part of cup *a*, partitions *eee*, and ink-troughs *d d d* of Fig. 1. Having so placed the combination-cover, it will easily be discovered that the lower part *j* of sponge-cup *g*, Fig. 2, fits like an axle in cup *a*, Fig. 1, and consequently that slot *f*, Fig. 2, can be moved about over the tops of these circular ink-troughs *d d d*, Fig. 1, with great ease, the pen-holder rack-cones *h h h h*, Fig. 2,

affording good leverage points for the moving around of the outer rim of this combination-cover.

I wish to note here that I do not fix on any certain size for my improved inkstand or any of its parts, nor do I fix on the number of inclined-bottom ink-troughs about the central cup. The different parts or the whole stand may be constructed according to the requirements and necessities of the case. It may be also well to note that the inclination of the bottoms of the ink-troughs may be much or may be but little, as the requirements of the case demand.

I do not claim in this my improvements in inkstands an inclined-bottom ink-trough nearly or quite surrounding a central cup, for that was anticipated in my patent of March 20, 1888, aforesaid; but what I can clearly claim is the lowering of said central cup, so that the combination-cover that I have provided can be fitted onto and into the aforesaid central cup and its encircling ink trough or troughs, as I have explained. As to the combination-cover; I do not claim a sponge-cup fitting into the central cup that is nearly encircled by an inclined-bottom ink-trough; nor do I claim a rim-covering with a dipping-hole through it that can be easily moved about over the top of said ink-trough and around the central cup of the bottom part of the inkstand; nor do I claim a pen-holder rack unconnected with the sponge-cup, for such improvements were anticipated in my improvements in inkstands of March 20, 1888, aforesaid; but

What I do claim as my invention and improvements in inkstands, and wish to secure by Letters Patent, is—

The inkstand-cover having the pen-holder rack and sponge-cup, as described, connected thereto, in combination with the cup *a*, encircled with the inclined troughs, as and for the purpose set forth.

ASAHEL P. PICHEREAU.

Witnesses:

FRANK L. ANDREWS,  
J. A. BARNETT.

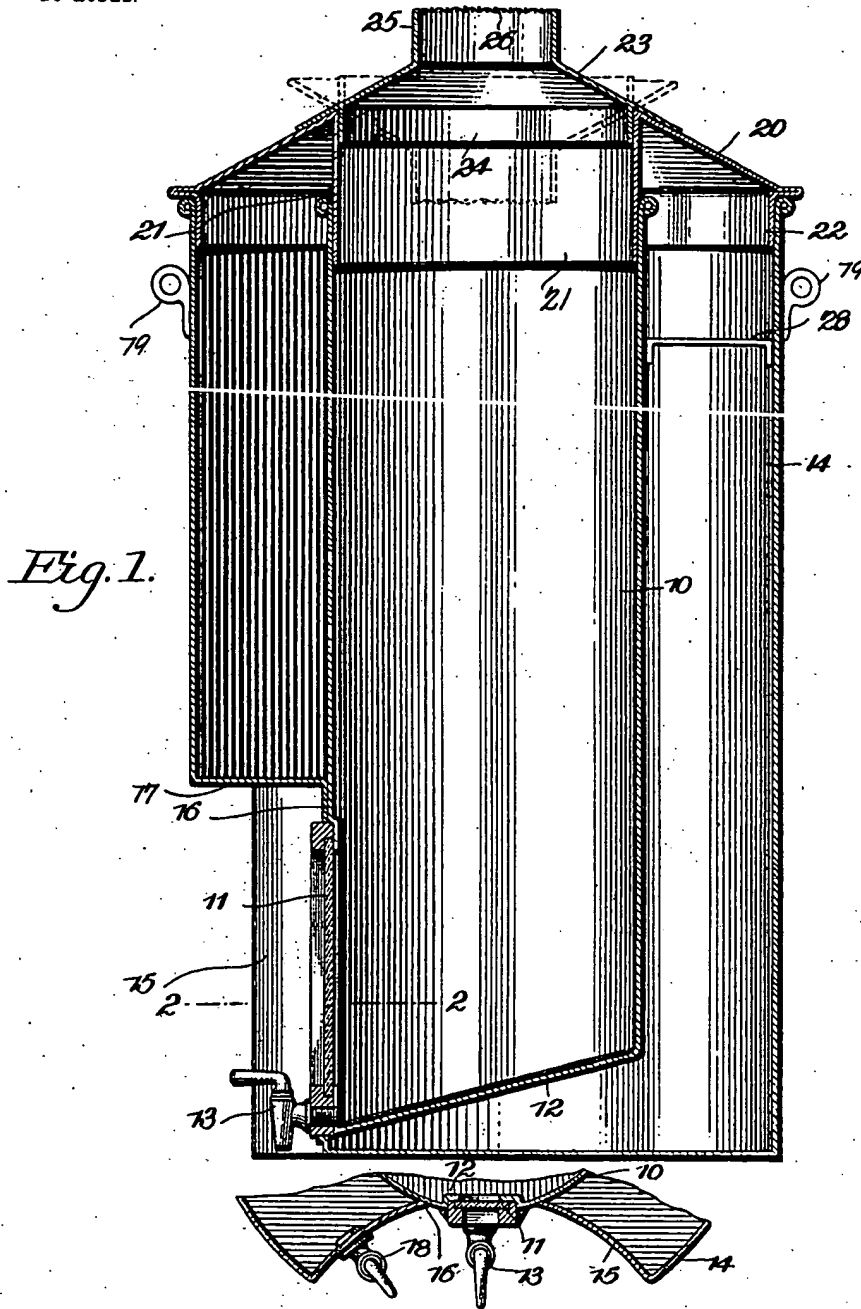
No. 746,264.

PATENTED DEC. 8, 1903.

S. R. BARHITE.  
CREAM SEPARATOR.

APPLICATION FILED MAY 27, 1903.

NO MODEL.



Witnesses  
*E. H. Stewart*  
*C. H. Woodward.*

Fig. 2.

*Samuel R. Barhite*, Inventor.  
by *C. H. Woodward*  
Attorneys

THE MORRIS PETERS CO. PHOTO-LITHO. WASHINGTON, D. C.

Express Mail Number  
EV242440406US

## UNITED STATES PATENT OFFICE.

SAMUEL RUNDLE BARHITE, OF DES MOINES, IOWA.

## CREAM-SEPARATOR.

SPECIFICATION forming part of Letters Patent No. 746,264, dated December 8, 1903.

Application filed May 27, 1903. Serial No. 158,990. (No model.)

*To all whom it may concern:*

Be it known that I, SAMUEL RUNDLE BARHITE, a citizen of the United States, residing at Des Moines, in the county of Polk and State of Iowa, have invented a new and useful Cream-Separator, of which the following is a specification.

This invention relates to improvements in cream-separators or milk-coolers, and has for its object to simplify and improve devices of this character and produce a device simple in construction, easily operated, and readily cleansed; and the invention consists in certain novel features of construction as hereinafter shown and described, and specified in the claim.

In the drawings illustrative of the invention, in which corresponding parts are denoted by like designating characters, Figure 1 is a vertical sectional elevation. Fig. 2 is a transverse section on the line 2-2 of Fig. 1.

The improved device consists in an inner shell or milk-receptacle 10, having a transparent gage 11 in one side and with an inclined bottom 12 and having a draw-off faucet 13 between the gage and the lowest point of the inclined bottom. Surrounding the milk-receptacle is a water-receptacle or outer shell 14, having a recess in one side opposite the gage 11 and faucet 13, formed by turning a portion 15 of the wall of the water-receptacle inwardly and curving the central portion 16 of the intumed portion outwardly again, the curve 16 conforming to the outer surface of the cream-separator. The outwardly-curved portion 16 is provided with an elongated aperture slightly larger than the combined area of the gage 11 and faucet 13, and the milk-receptacle will be set within the water-receptacle with the gage and faucet opposite this aperture and extending there-through and secured in place as by soldering applied between the edges of the aperture and the adjacent wall of the inner receptacle. The upper edge of the intumed portion 15 is connected to the water-receptacle by a filling-section 17, as shown in Fig. 1. By this means the gage and faucet are readily accessible without exposing more of the surface of the inner receptacle than is occupied by the gage and faucet, so that there will be

a minimum of loss from radiation and the greatest possible amount of the surface of the inner receptacle surrounded by the water. By this arrangement the milk-receptacle can be constructed complete with its gage and draw-off faucet and the water-receptacle likewise constructed complete with its recess having the central aperture, and then when the milk-receptacle is inserted it is only necessary to solder the edges of the aperture to the side walls of the inner receptacle, as above described. The labor necessary to connect the two parts is thus very slight and can be very quickly accomplished.

A draw-off faucet 18 for the water from the receptacle 14 may be placed through the intumed portion 15, which will thus be out of the way and so that no part of the device except the usual handles 19 will extend beyond the general surface of the water-receptacle.

The water-receptacle is provided with a closure in the form of an annular cover 20, having a depending rim 21, uniform with its inner opening and extending into the upper part of the milk-receptacle 10, and with an outer rim 22, extending into the water-receptacle 14, as shown in Fig. 1. By this means the water-receptacle is closed independently of the milk-receptacle and likewise forming a protector to the milk-receptacle by means of the depending inner rim 21, which serves, as will be obvious, to prevent the milk when poured in from entering the water-space. This is an important feature of the invention and adds materially to the value and efficiency of the device and saves time and labor, as less care is required in depositing the milk.

A secondary cover 23 is provided for the annular cover 20 and provided with a depending rim and adapted to fit into the inner rim 21, as shown. The smaller cover 23 is provided with a central aperture having a tubular extension 25, provided with a diaphragm 26 of screen material, as shown.

This secondary cover member when inverted in position or with the tubular extension and its screen extending into the central opening in the cover member 20 forms a "screen-funnel" to strain the milk when inserted into the receptacle 10.

When the water is to be renewed in the

receptacle 14, the cover member 20 may be removed and the secondary cover member placed over the milk-receptacle, which will thus protect the contents of the latter from the inflowing water, the tubular extension also assisting in protecting the milk-receptacle from the inflowing water.

One or more stays 28 may be arranged between the milk and water receptacle, as shown in Fig. 1, if required.

By this simple means a very complete, compact, and simply-constructed device of the character described is produced which may be manufactured in any desired size or capacity and of any required material.

Having thus described the invention, what I claim is—

A cooling-can comprising an outer shell having an open top, an inner shell disposed therein with the walls thereof spaced therefrom, a dome-shaped cover for said outer shell having its peripheral edge folded inwardly upon itself to form a rim and then bent down-

wardly to form a depending flange adapted to fit in the mouth of said outer shell with the rim projecting over the edge of said outer-shell mouth, said cover having a central aperture of a size to correspond with the top opening of the inner shell and provided with a depending rim around said aperture to fit in the opening of said inner shell, and a dome-like cover for said inner shell having a depending rim on its inner face spaced from the edge thereof and fitting in the aperture of said outer-shell cover with its projecting edge overlapping said outer-shell cover, said inner-shell cover terminating in a tubular extension having a perforated closure.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

SAMUEL RUNDLE BARHITE.

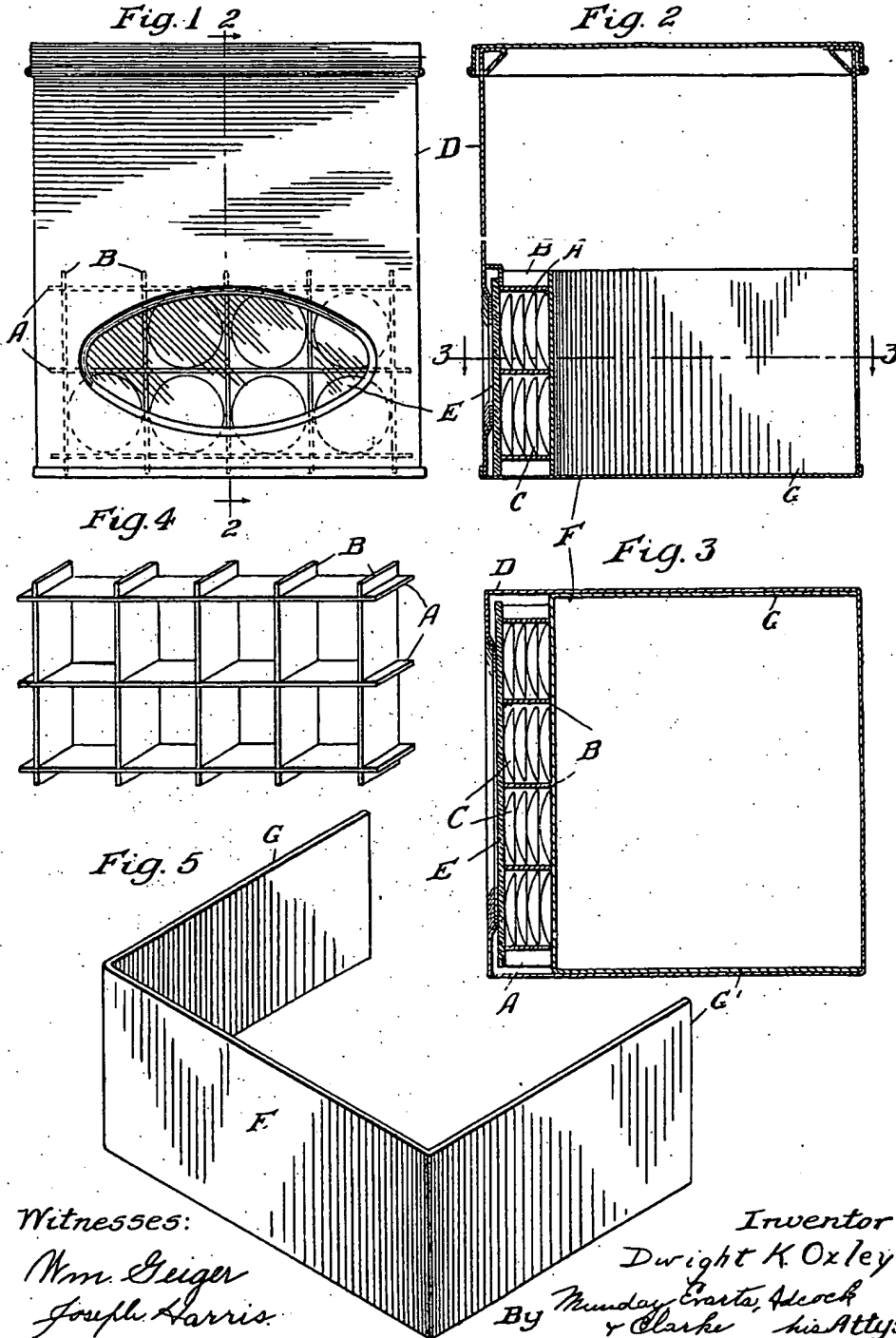
Witnesses:

E. S. HULSE,  
E. M. GRAY.

D. K. OXLEY.  
 DISPLAY BOX FOR BAKERY PRODUCTS.  
 APPLICATION FILED MAY 1, 1914.

1,147,041.

Patented July 20, 1915.



Witnesses:

Wm. Geiger  
 Joseph Harris

Inventor

Dwight K. Oxley

By Munday, Evans, Adcock  
 & Clarke his Attys.

## UNITED STATES PATENT OFFICE.

DWIGHT K. OXLEY, OF OMAHA, NEBRASKA.

DISPLAY BOX FOR BAKERY PRODUCTS.

1,147,041.

Specification of Letters Patent.

Patented July 20, 1915.

Application filed May 1, 1914. Serial No. 885,586.

*To all whom it may concern:*

Be it known that I, DWIGHT K. OXLEY, a citizen of the United States, residing at 3115 Davenport street, Omaha, in the county of Douglas and State of Nebraska, have invented a new and useful Improvement in Display Boxes for Bakery Products, of which the following is a specification.

This invention relates to an improvement in display boxes for bakery products and it consists in providing the glass fronted display box internally with a shallow series of shelf pockets immediately behind the glass and separated from the rest of the box interior by a partition, and on which shelf pockets an orderly display of a sample of the contents may be made which will not change as the rest of the box contents are lowered, or removed. All of which will more fully hereinafter appear.

Prior to my invention considerable difficulty and annoyance has been experienced by reason of the fact that the contents of the cans after part has been sold does not present a pleasing appearance through the glass front because of the disordered and disarranged condition of the interior.

The appearance of the goods through the front of the can has marked effect upon the salability of the goods and it is the principal object of this invention to provide each can with means for retaining samples of the goods in attractive display position behind the glass front until after the entire contents has been sold.

A further object of the invention is to provide such a means which will be readily removable and which will permit new samples to be inserted for those previously displayed each time the can is refilled, so that a single can may successively be used for goods of widely varying description.

A further object of the invention is the provision of means for retaining these samples in place, which may be so cheaply provided that it may be discarded and new means substituted at each refilling of the can.

Other objects and advantages of the invention will be apparent as it is better understood from the following description when considered in connection with the accompanying drawing illustrating a preferred embodiment thereof.

In the accompanying drawing which forms a part of this specification Figure 1 is

a front elevation of a display box embodying my invention; Fig. 2 a vertical section of the same taken on the line 2-2 of Fig. 1; Fig. 3 a horizontal section of the same taken on the line 3-3 of Fig. 2; Fig. 4 a perspective view of the series of shelf pockets shown removed from the display box; and Fig. 5 a similar perspective view of the backing partition shown removed.

The ordinary display boxes for containing and displaying bakery products, such as biscuits, crackers, cookies, cakes and other such articles, are provided with a hinged cover and have a glass display window in their front through which the contents are visible; which display window is a great convenience both to the salesman and to the customer. The order loving dealer usually desires to have that portion of the contents immediately behind the glass window placed in a regular and stated fashion so that said contents may be better seen and may make a better appearance. And by the exercise of great care such an arrangement of the crackers, cookies or other articles may be made in the ordinary display box and this is often done when the boxes are first filled at the factory. But this requires care and some skill, and the arrangement cannot survive the emptying of the box by sales. For as soon as the box is emptied below the upper edge of the window the careful arrangement is destroyed. In the present invention I provide against such destruction of the arranged display by the emptying of the box in selling as follows: I make a pocket shelf structure such as is shown at Fig. 4 of the drawing and which may be made of paper or pasteboard quite similar to the pockets employed in egg carrying cases and which may consist of the horizontal shelves A and the vertical risers B, halved or notched together in the manner of the egg pockets above named. The shelves and risers of this structure are deep enough preferably to contain several of the articles to be displayed and the separate pockets are of lateral dimensions such as to receive and maintain in an upright position a single one or a single series of such articles as indicated at Figs. 1, 2 and 3 of the drawing. The shelf structure so constructed is placed in the display box D immediately behind the glass window E and in this position is filled with its complement of articles C. This may easily be done

by tilting the display box forward, as is usually done in filling such boxes. When this has been accomplished the backing partition F is placed in the box. Its backwardly extending members G G<sup>1</sup> reach back to the back wall of the box and maintain the partitions snugly against the back of the shelf pockets. This partition may be made of stiff pasteboard, of a height equal to the height of the series of shelf pockets, and of dimensions such as to fit nicely in the box. After the shelf pockets have thus been filled and their contents secured by the backing partition the box may be filled with the articles C loosely or irregularly or in any manner desired. And as the contents are sold out the display is maintained and will continue until the box is empty, the displayed articles being either retained in position to indicate the contents when the box is again filled, or sold out as desired. This apparatus is exceedingly cheap, it may be shipped in the flat, and applied to any ordinary display box.

I claim:

1. A display cracker can comprising a transparent front portion; and an interior member which is adapted to be removed from within the said body and comprising a series of shelf pockets behind the said transparent front portion and a partition for retaining articles in said shelf pockets, the said shelf pockets consisting of strips of sheet

material arranged cross-wise of one another, certain of which strips extend upward and downward and serve as supports for the pockets independent of the contents of the can and hold the crackers from lateral movement, and extending rearwardly into the can for only a portion of the distance to the rear wall of the can, thereby leaving substantially the entire interior of the can empty to be filled with goods in irregular order, while that small portion of the goods which is displayed is maintained in regular order.

2. A display cracker can comprising a rectangular body having a glass front, a member providing a series of shelf pockets behind said transparent front, and a partition disposed behind said member, said partition being provided with a rearwardly extending projection adapted to engage the rear wall of said body.

3. A display cracker can comprising a rectangular body having a glass front, a member providing a series of shelf pockets behind said transparent front, and a partition disposed behind said member, said partition being provided with a pair of rearwardly extending wings adapted to engage the rear wall of the body.

DWIGHT K. OXLEY.

Witnesses:

EDWARD J. COSTELLO,  
MAURICE R. BORNET.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."

## [54] ADVERTISING DISPLAY APPARATUS

[76] Inventor: Stanley Morris, 13 Woodside Rd.,  
Springfield, N.J. 07079

[21] Appl. No.: 403,575

[22] Filed: Jul. 30, 1982

[51] Int. Cl.<sup>3</sup> ..... G09F 3/18[52] U.S. Cl. .... 40/10 D; 211/78;  
211/131; 40/493[58] Field of Search ..... 40/505, 10 D, 358, 324,  
40/107, 109; 46/1 L; 220/23.86; 211/131, 78

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Primary Examiner—Robert P. Swiatek

Assistant Examiner—Cary Stone

Attorney, Agent, or Firm—McCoy &amp; Morris

## [57] ABSTRACT

A display apparatus for displaying a plurality of advertisements comprising a base, which holds condiments and comprising a plurality of condiment holding sec-

tions separated from each other by the display apparatus, support members on the base for displaying a plurality of business cards with each of the business cards facing in a different respective direction. The cards are removably mounted and the display apparatus is mounted for movement relative to the base to change the direction in which a given business card faces. A transparent cover, removably mounted to the display apparatus, protects the business cards on the display apparatus and comprises a single integral member comprising a hollow, vertically disposed tube having four walls and having a rectangular horizontal cross-section. A plurality of vertically disposed support members or sections each facing in a different respective direction are protectively covered by the transparent tube. At least one business card is mounted to each support member. The support members are disposed on the inside of the tube, one support member facing each of the four walls of the tube. A resilient, strip-like member is located within the tube and is resiliently deformable between an expanded, open first condition and a second condition in which the strip-like member is at least partially closed for urging the advertisement on each support member toward its respective wall on the transparent tube. The apparatus is preferably displayed on restaurant tables so that customers can view the advertisements contained therein during their meal. The tube embodiment is of a size which preferably accommodates twelve business cards; three cards on each support member.

16 Claims, 9 Drawing Figures

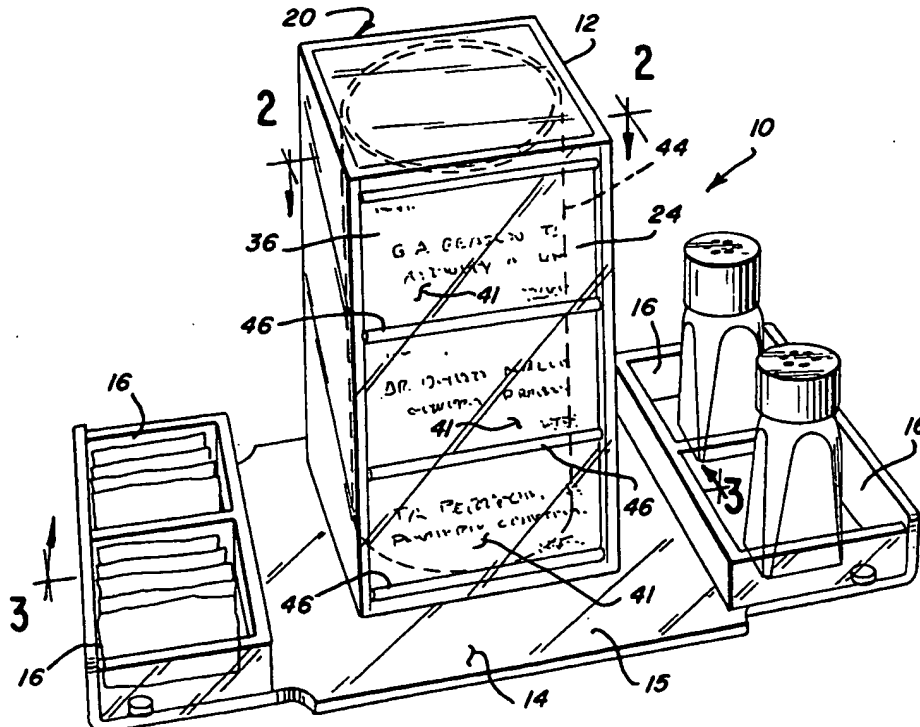


FIG. 1

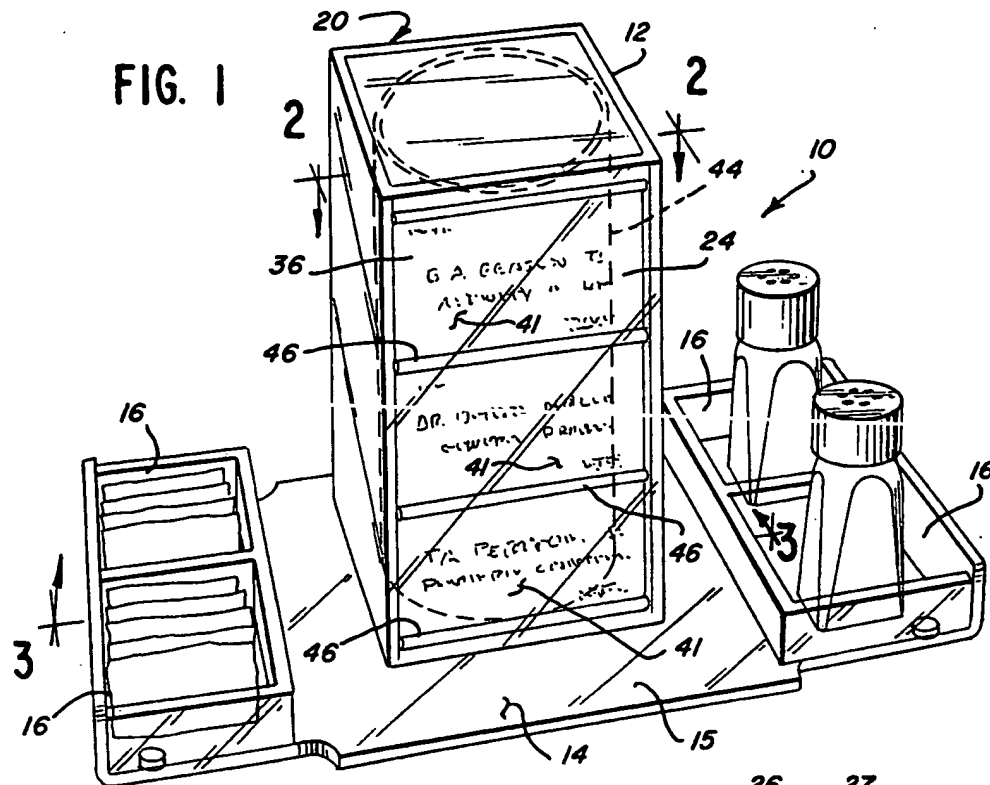


FIG. 2

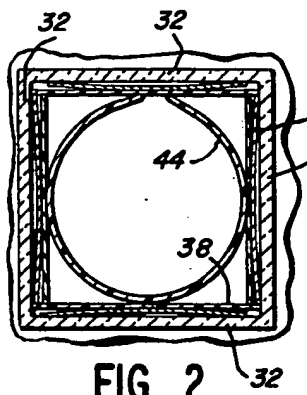
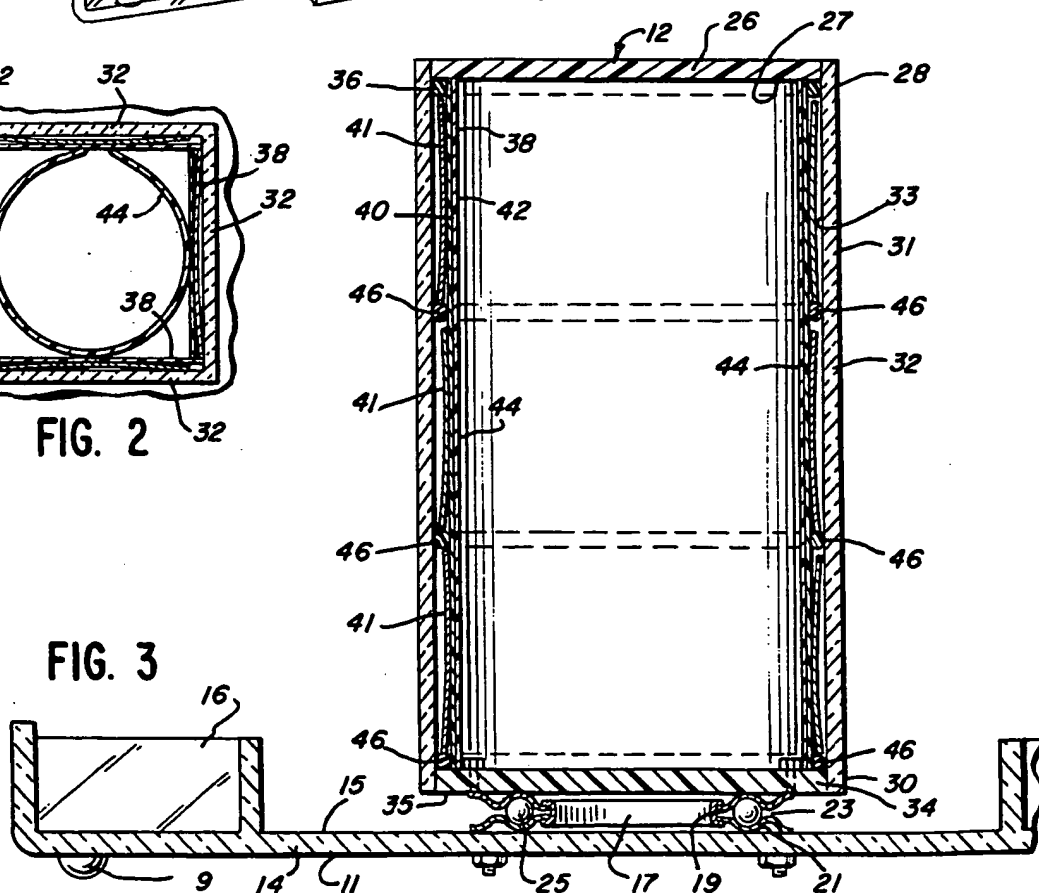
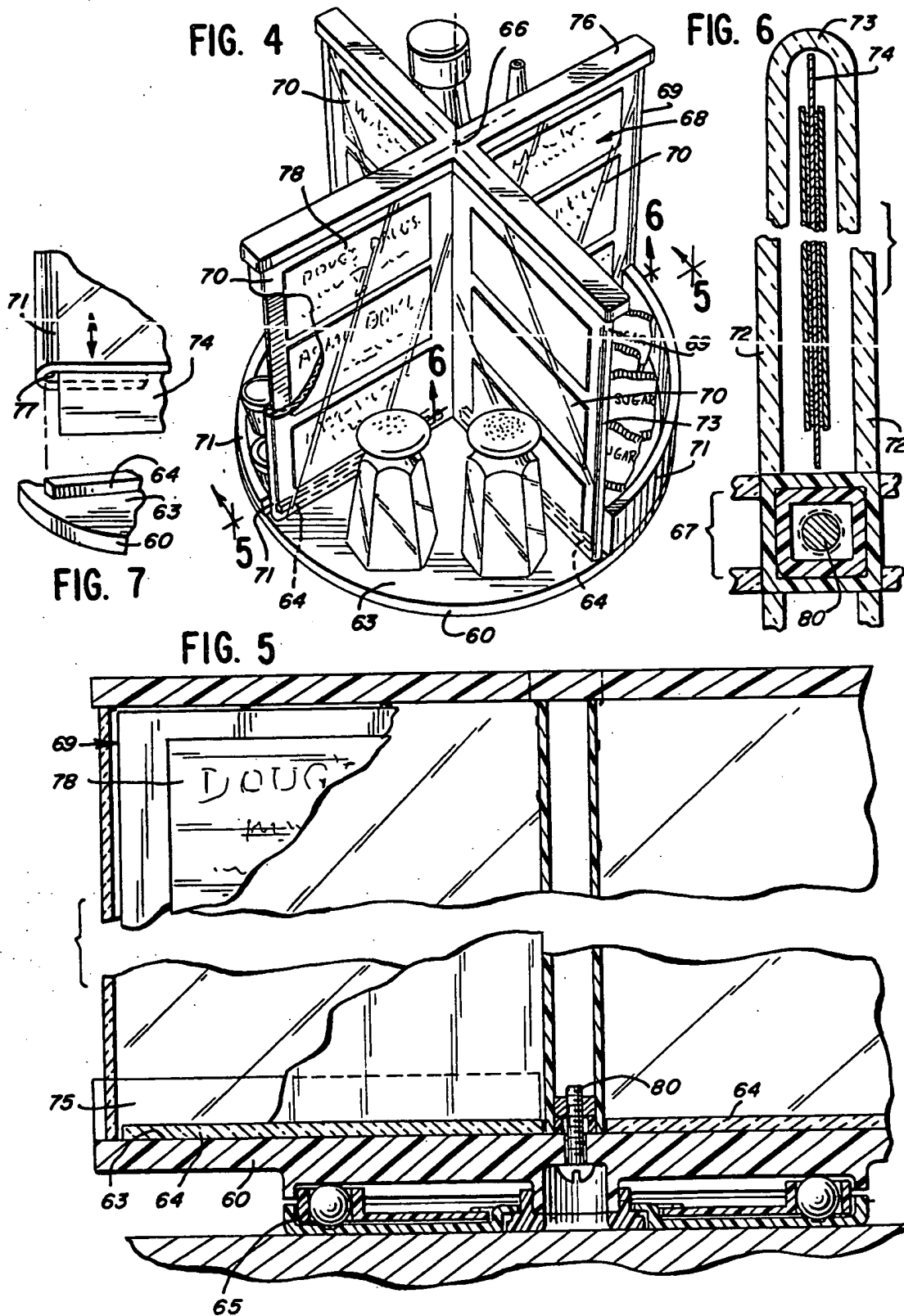
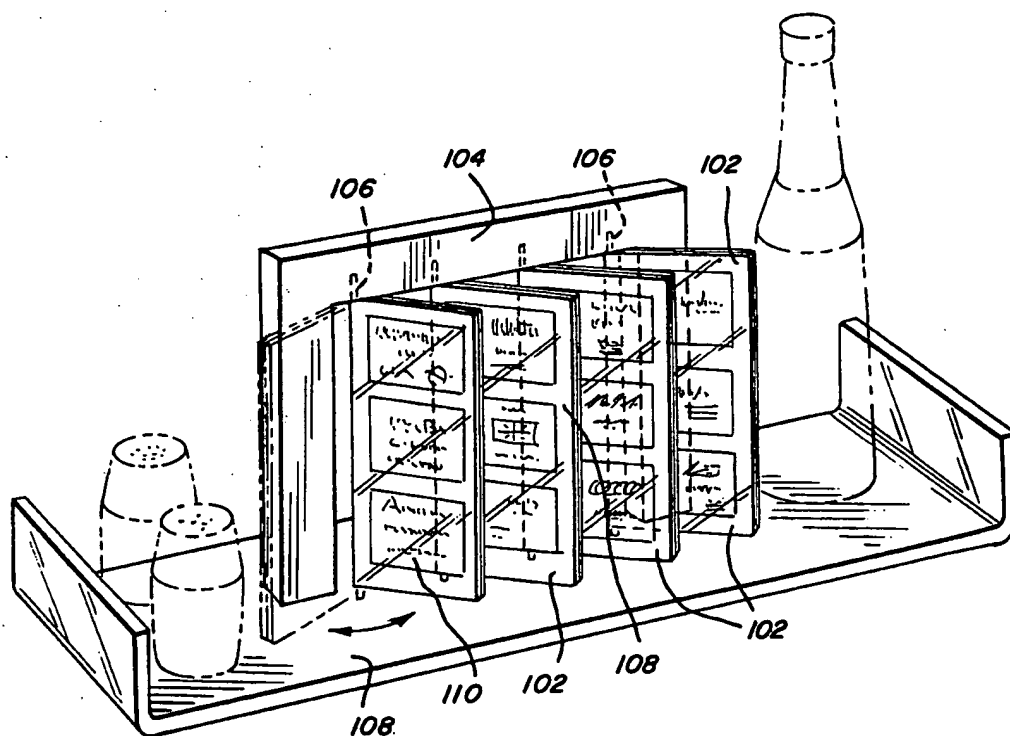
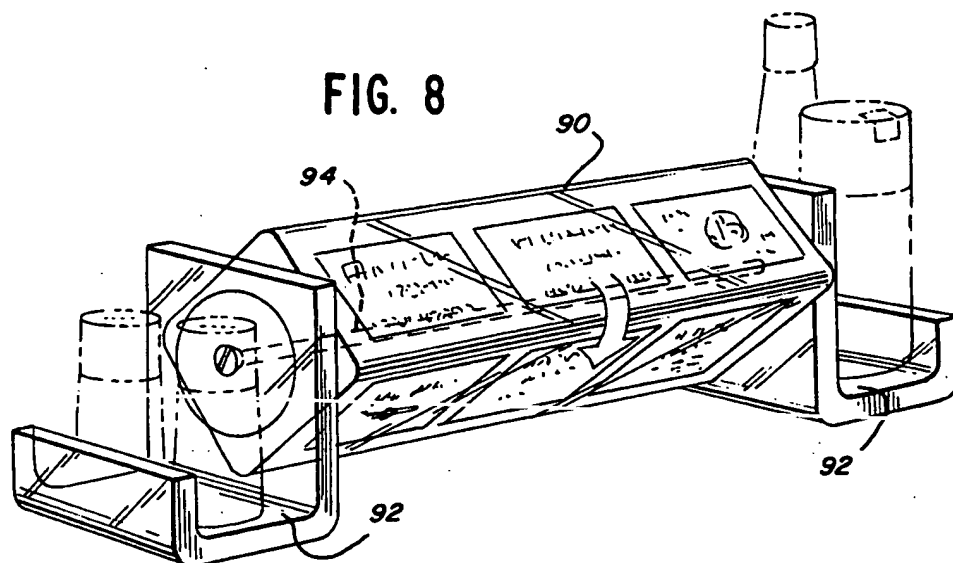


FIG. 3







## ADVERTISING DISPLAY APPARATUS

### BACKGROUND OF THE INVENTION

#### 1. Field of the Invention

The apparatus of the subject invention pertains to an advertising display device with each set of advertisements facing in a different respective direction. The apparatus is preferably used on restaurant tables, so that the advertisements or menus can be viewed by customers during their meal.

#### 2. Description of the Prior Art

Restaurant customers are a "captive" audience for most types of advertisement media while they wait for and eat their food. It is not unusual to find on restaurant tables paper displays for soft drinks and the like, and even placemats containing information to read or puzzles to solve.

Nowhere has there been provided in restaurants an advertising display apparatus which compactly advertises the services and products of a plurality of businesses on each table. If such a device were available, the "captive" audience would become a huge market for products and services. Obviously, restaurant owners as well as the advertisers could greatly benefit from the use of such an apparatus.

### SUMMARY OF THE INVENTION

An apparatus comprising means for displaying a plurality of advertisements or menus comprising a base, means on the base for holding condiments and comprising a plurality of condiment holding sections separated from each other by the display means, means on the base for displaying a plurality of business cards with each of the business cards facing in a different respective direction, means for removably mounting the cards and means mounting the display means for movement relative to the base to change the direction in which a given business card faces. Transparent cover means, removably mounted to the display means, protects the business cards on the display means and comprises a single integral member comprising a hollow, vertically disposed tube having four walls and having a rectangular horizontal cross-section. A plurality of vertically disposed support members or sections each facing in a different respective direction are protectively covered by the transparent tube. Means on each support member for mounting at least one business card to each support member. The support members are disposed on the inside of the tube, one support member facing each of the four walls of the tube. A resilient, strip-like member is located within the tube and is resiliently deformable between an expanded, open first condition and a second condition in which the strip-like member is at least partially closed for urging the advertisement on each support member toward its respective wall on the transparent tube. Mounting means attaches at least one business card to each support member. The apparatus is preferably displayed on restaurant tables so that customers can view the advertisements contained therein during their meal. The tube embodiment is of a size which preferably accommodates twelve business cards; three cards on each support member.

In another embodiment of the apparatus of the present invention the transparent cover means comprises four transparent sections each protectively covering one of four support members. The support members are arranged in a radial disposition from a common, cen-

trally located vertical axis, each support member extending at a 90 degree angle relative to the two adjacent support members. The four transparent sections extend radially in the form of an "X" from a centrally located, vertically disposed axial portion wherein one of the cover means and one of the support members is removable relative to the other when the cover means is detached from the condiment holding means. Engaging means on the condiment holding means engage each of the cover sections at the bottom of the sections of fix the position of the cover sections on the condiment holding means. The cover means is detachably mounted on the condiment holding means and the condiment holding means is mounted for rotation about the vertical axis, relative to the base. The support members and cover sections have means mounting the support members for rotational movement with the cover sections when they rotate with the condiment holding means.

The "tube" and "X" embodiment of the invention may be used without the base condiment holding means. In the preferred embodiment of the apparatus each support member comprises three or four display sections. Each display section holds one business card. Thus, the apparatus is capable of simultaneously displaying twelve or sixteen business cards. Any number of cards is theoretically possible to use with each support member; however, it is desirable to use no less than two cards, and nor more than four cards for each support member. In addition, a single card or advertisement or menu could be attached to a support member.

In the "tube" embodiment, the size of the base is approximately 12" long by 5-15/16" wide. The size of the tube is approximately 4" square by 6 3/4" high, using three cards per support member.

In the "X" embodiment, the condiment holding member has a diameter of approximately 8", and the transparent cover is approximately 7 1/8" in diameter. The height of the transparent cover is approximately 6 3/4" and each support member holds six cards.

The apparatus is reusable, lightweight, easily cleaned, simple in design, and economical to manufacture.

These and other advantages of the invention will become apparent to those of ordinary skill in the art with reference to the further detailed description of this invention.

### DESCRIPTION OF THE DRAWING

FIG. 1 is a perspective view of the vertically disposed tube embodiment of the advertising display apparatus;

FIG. 2 is a sectional top view along Line 2—2 of FIG. 1 disclosing the top end of the tube;

FIG. 3 is an elevational, partial-cutaway sectional view along Line 3—3 of FIG. 1;

FIG. 4 is a perspective view of the "X" embodiment of the advertising display apparatus;

FIG. 5 is an elevational, partial cutaway sectional view along Line 5—5 of FIG. 4;

FIG. 6 is a partial cutaway sectional view along Line 6—6 of FIG. 4;

FIG. 7 is a partial cutaway perspective and exploded view of a transparent section;

FIG. 8 is a perspective view of a horizontally disposed tube embodiment of the advertising display apparatus; and,

FIG. 9 is a perspective view of a leaf embodiment of the advertising display apparatus.

### DESCRIPTION OF THE PREFERRED EMBODIMENT

Referring to FIG. 1, there is shown a perspective view of one of the preferred embodiments of the advertising display apparatus. Apparatus 10 comprises a substantially flat, rectangularly shaped base 14 having a top surface 15. Base 14 also comprises a plurality of condiment holding means or sections 16 which are separated from each other on either end of said base by advertising display means 20. Condiment holding means 16 can hold sugar, salt, pepper and the like. Obviously, any number of condiment holding sections can be provided depending upon the size of the base. Four short legs 9 are attached to bottom surface 11 of base 14.

Advertising display means 20 comprises means for displaying a plurality of advertisements, such as business cards 24, menus and the like, with each card facing in a different respective direction. Advertising display means 20 further comprises a single integral transparent cover means which protects the business cards. Cover means comprises a hollow, vertically disposed tube 12 having a rectangular horizontal cross-section (see FIG. 2). Tube 12 comprises a top end 28, a bottom end 30, a top piece 26 having a bottom surface 27, a bottom piece 34 having a bottom surface 35, and four (4) walls or side pieces 32. Bottom piece 34 and side pieces 32 form a solid integral unit. Top piece 26 is not permanently attached to tube 12 so that the support members 38 which hold the cards can be easily removed from tube 12 through top end 28. Each side piece 32 comprises an outer surface 31 and an inner surface 33. Alternatively, top piece 26 is permanently attached to top end 28 and bottom piece 34 is not permanently attached to bottom end 30. A long threaded rod is permanently attached at one end to the bottom surface 27 of top piece 26 by threading and gluing the rod end into a small plastic block which is attached to bottom surface 27. After the advertisements are placed in tube 12 through the bottom end, the tube is placed over and adjacent to bottom piece 34 and the opposite end of the rod is placed through a hole in the center of bottom piece 34. The rod extends out of the bottom surface of base 14. A nut is then used to tighten the rod to secure the tube to the bottom piece 34. The purpose of this alternate design is to make the tube tamper-proof to protect the advertisement.

Tube 12 is rotatably mounted to top surface 15 of base 14 so that the direction in which a given card faces may be changed. Mounting tube 12 to base 14 is accomplished by using a "lazy susan" device 17 which comprises an upper and lower piece of galvanized steel 19 and 21, respectively, which form a hollow tube 23 of a size adapted to permit a plurality of steel ball bearings 25 to freely rotate therein. Upper piece 19 is bolted to bottom surface 35 of bottom end 34, and the lower piece 21 is bolted to top surface 15 of base 14. Tube 12 is free to rotate about base 14 with a minimum of friction so that each side of tube 12 may be easily viewed at any desired position by the customer.

A plurality of support members, or display sections 38 comprise means for displaying a plurality of advertisements. Each support member is vertically disposed contiguous to a respective inside wall 33 of a side piece 32. Each support member 38 faces a different respective direction when in place in tube 12. Each support member 38 has an outside surface 40 and an inside surface 42; the outside surface 40 facing the inside wall 33 of a

respective side piece 32. Three (3) cylindrical plastic ridge members 46 are glued to outside surface 40 of each support member 38, to form three (3) support sections 41 of a size adapted to permit a standard sized business card to "snap-fit" between any two ridge members. The cards may be removed and replaced with other cards without removing the remaining cards. A support ridge 36 is permanently glued to the top inside surface 33 of each side piece 32 to hold the top business card in place when a support member is in position, and to form a ledge around the inside perimeter of the top end of tube 12 for the support to top piece 26.

A small strip-like sheet of rigid but resilient plastic 44 is rolled into a tube and is of a size which when placed into the cavity of tube 12 normally expands between an expanded, open first condition and a second condition in which it is at least partially closed. The expansion is due to the inherent expanding force caused by rolling it into a tube. This expanding force simultaneously pushes, or urges, in an outwardly direction, against the inside surface 42 of each support member 38, thereby causing each support member 38 to press against the advertisement and inside wall 33 of each side piece 32. Thus, support members 38 stay in a fixed position against their respective side pieces until plastic sheet 44 is removed. While the length of tube 44 need only be long enough to permit a reasonable expansion inside of tube 12, the height must be at least tall enough to press against the top third of the top support section 41 of each support member 38 to ensure that each support member is substantially contiguous against inside wall 33. The purpose of this design is to permit the removal of each support member as quickly as possible while preventing the support members from falling backward into the cavity of the tube 12. An alternate design could use slotted means (which is not shown in the drawing) which is attached to the inner walls of each side piece 38 to permit the insertion and removal of each support member 38.

Each support member 38 is approximately 6½" long by 3½" wide and is made out of rigid plastic to ensure durability. Cardboard may be used in place of the plastic support members, however, in such a case each advertisement should be permanently glued thereto. If an advertiser wishes to use two or more support sections this can be easily accomplished by deleting one more support ridges 46 from a support member 38.

The apparatus is preferably constructed out of a transparent plastic material commonly known as "lucite" plastic. It may be assembled by gluing the individual pieces together, or it may be molded by conventional molding techniques into a one piece base and a one piece tube.

In the preferred embodiment of the apparatus, twelve cards are displayed at one time. Obviously, a longer tube 12 may be used to accommodate more cards; however, a four "tier" tube is the maximum desirable height and a two "tier" tube is the minimum desirable height.

Referring to FIG. 4, there is shown a perspective view of another preferred embodiment of the advertising display apparatus. This embodiment is commonly referred to as the "X" embodiment for the reason that the cover means has an "X" cross-section. The apparatus comprises a substantially flat, circularly-shaped condiment holding means 60 having four rectangularly-shaped radially disposed blocks 64 which are permanently attached to top surface 63 of holding means 60. Blocks 64 are disposed from a common, centrally lo-

cated vertical axis 66, each block being at a 90 degree angle relative to the two adjacent blocks. A barrier guard 71 is attached to at one or more places on top surface 63 to prevent the various condiments from falling off holding means 60.

Cover means 68 is a one-piece transparent unit having four vertically disposed transparent sections 70; each section comprises two side pieces 72 which are joined at the distal end 73. Each side piece 72 extends radially from a centrally located vertically disposed axial portion 67. Each side piece 72 is separated from the other by a distance of approximately  $\frac{1}{4}$  inches to permit the insertion therein of a support member 74 which is made out of rigid plastic or cardboard. Cover means 68 has a permanently attached top piece 76 which is glued to top end 69 of cover means 68. Bottom end 75 of each section 70 has an opening 77 to permit the insertion and engagement of block 64 when cover means 68 is mounted to the condiment holding means.

Each business card 78 is glued or otherwise affixed to each side of each support member 74 at equally spaced distances. Three cards are attached to each side of support member 74. Each support member 74 is inserted into bottom end opening 77 of each transparent section 70. After each support member is placed into its respective transparent section 70 the entire "X" unit is engaged with blocks 64 to fix the position of cover means 68. Holding means 60 is rotatably mounted to a base 65 using a "lazy susan" device which is similar in function to the ball bearing device previously described for the "tube" embodiment. Screw 80 is used to attach cover means 68 to holding means 60. This mounting arrangement causes holding means 60 and cover means 68 to rotate simultaneously about base 65.

A third embodiment of the advertising display apparatus is shown in FIG. 8. Tube 90 is constructed substantially identical to tube 12 shown in FIG. 1. This tube, however, is rotatably mounted in a horizontal position to condiment holding means 92 by means of a long screw 94. The placement and positioning of the support members and business cards into tube 90 is similar to the procedure used in the "tube" embodiment.

A fourth embodiment of the advertising display apparatus is shown in FIG. 9. In this embodiment, a plurality of transparent sections 102 are each rotatably mounted at their end portion to support structure 104 about a vertically disposed pin 106. One end of pin 106 is rotatably mounted to support structure 104, and the other end is rotatably mounted to condiment holding means 108. Each transparent section 102 is hollow to permit the insertion therein of support members 108 which have business cards 110 attached to both sides thereof.

A fifth embodiment of the advertising display apparatus which is not disclosed in the drawing is the "Y" embodiment. The "Y" embodiment is identical in every aspect to the "X" embodiment except that the cross-sectional of the transparent cover means is in the shape of a "Y".

A sixth embodiment of the advertising display apparatus which is not disclosed in the drawing is the "cylindrical" embodiment. In this embodiment the advertising display means is in the shape of a hollow, vertically disposed cylinder which is rotatably mounted to condiment holding means as described in the description of the "tube" embodiment. The area of the inside surface of the cylinder is of a size adapted to permit four support members to be placed adjacent thereto. Slotted means along the perimeter of the bottom and top ends of

the cylinder permit the bottom and top ends of each support member to be inserted therein.

Referring to FIG. 1, the size of base 14 is approximately 12" long by 5-15/16" wide although the use of condiment holding sections is optional. Additionally, the size of tube 12 is approximately 4" square by 6 $\frac{1}{2}$ " high, but it also may function adequately by showing two cards per side to four cards per side rather than three cards per side. Obviously, the size and height of the tube may vary according to the available area on which the display apparatus is used.

In the "X" embodiment, the condiment holding member has a diameter of approximately 8" and the transparent cover has a diameter of approximately 7 $\frac{1}{8}$ ". The height of the transparent cover is approximately 6 $\frac{1}{2}$ " and each support member holds six (6) cards.

In the preferred embodiment of the apparatus, individual business cards are used. One may use, however, other suitable advertising means, such as a single card of a size adapted to fit onto the entire area of one side of the support member.

The apparatus is reusable, lightweight, easily cleaned, simple in design and economical to manufacture.

The foregoing description and drawing merely explains and illustrates the invention and the invention is not limited thereto, except insofar as the independent claims are so limited is those who are skilled in the art and have the disclosure before them will be able to make modifications and variations therein without departing from the scope of the invention.

What is claimed is:

1. In combination:

a base;

means on said base for holding condiments;

a plurality of support members on said base, each support member facing in a different respective direction;

means for mounting at least one advertisement on each of said support members;

means mounting said support members for movement relative to said base to change the direction in which a given advertisement faces;

a hollow, transparent tube having a plurality of walls and constituting transparent cover means for enclosing and protectively covering said support members;

each support member and its respective advertisement facing a respective wall on said transparent tube; and,

a resilient, strip-like member located within said tube and resiliently deformable between an expanded, open first condition and a second condition in which said strip-like member is at least partially closed for urging the advertisement on each support member toward its respective wall on the transparent tube.

2. In the combination of claim 1:

means removably mounting said cover means relative to said support members.

3. In the combination of claim 1 wherein each support member comprises:

a plurality of display sections each comprising means for displaying an advertisement facing in the same direction.

4. In the combination of claim 1 wherein said condiment holding means comprises:

a plurality of condiment holding sections separated from each other by said tube.

5. In the combination of claim 1 wherein each support member comprises:  
means for removably mounting said advertisements.
6. In the combination of claim 1 wherein:  
said support members are vertically disposed each facing in a different respective direction;  
means on each of said support members for mounting a plurality of advertisements, one above the other; and,  
a vertically disposed, transparent cover means for protectively covering the advertisements on all of said plurality of support members.
7. In the combination of claim 6 wherein:  
said transparent cover means is a single integral member.
8. In the combination of claim 6 wherein:  
one of (a) said cover means and (b) a support member is removable relative to the other.
9. In the combination of claim 6:  
said cover means comprises a tube having a rectangular horizontal cross-section;  
said plurality of support members are disposed on the inside of said tube, there being one support member facing each of the four walls of said tube;  
said mounting means for the advertisements comprises means for mounting said advertisements between a respective support member and the corresponding tube wall toward which said support member faces; and  
said strip-like member normally urging each of said support members towards its correspondent tube wall.
10. In the combination of claim 9 wherein:  
each support member has an outside surface, facing its corresponding tube wall, and an inside surface; and,  
said strip-like member comprises means pressing outwardly against the inside surface of each support member.
11. A combination as recited in claim 1 wherein  
said support members are separate and discrete from said resilient strip-like member and each support member is located between said resilient strip-like member and a respective wall on the transparent tube.
12. A combination as recited in claim 4 wherein:  
said resilient strip-like member has a substantially cylindrical configuration when it is in its second condition.

13. A combination as recited in claim 12 wherein:  
said hollow tube has a polygonal configuration; and,  
a support member faces each side of the polygon.
14. In combination:  
a base;  
means on said base for holding condiments;  
a plurality of support members on said base, each support member facing in a different respective direction;  
means for mounting at least one advertisement on each of said support members, said advertisement mounted thereon;  
means mounting said support members for movement relative to said base to change the direction in which a given advertisement faces;  
a vertically disposed transparent cover means for protectively covering the advertisements on all of said plurality of support members;  
a plurality of support members arranged in a radial disposition from a common, centrally located axis, each support member extending at a 50 degree angle relative to the two adjacent support members;  
said transparent cover means comprising a plurality of transparent sections each protectively covering a respective one of said support members;  
said transparent sections extending radially from a centrally located, vertically disposed axial portion;  
means detachably mounting said cover means on said condiment holding means;  
means mounting said condiment holding means for rotation about said vertical axis, relative to said base; and,  
said means mounting said display means comprising means for securing together said support members, said transparent cover sections, and  
said condiment holding means for rotation about said vertical axis, relative to said base, as a unit.
15. In the combination of claim 14 wherein:  
one of (a) said cover means and (b) said support members is removable relative to the other when the cover means is detached from said condiment holding means.
16. In the combination of claim 14 and comprising:  
means on said condiment holding means for engaging each of said vertically disposed transparent cover sections, at the bottom of said section, to fix the position of said cover sections on the condiment holding means.
- \* \* \* \* \*

**United States Patent** [19]  
**Morris**

[11] **Patent Number:** 4,505,059  
[45] **Date of Patent:** \* Mar. 19, 1985

[54] **ADVERTISING DISPLAY APPARATUS**

[76] **Inventor:** Stanley Morris, 13 Woodside Rd.,  
Springfield, N.J. 07079

[\*] **Notice:** The portion of the term of this patent  
subsequent to Feb. 21, 2001 has been  
disclaimed.

[21] **Appl. No.:** 526,625

[22] **Filed:** Aug. 26, 1983

**Related U.S. Application Data**

[63] Continuation-in-part of Ser. No. 403,575, Jul. 30, 1982,  
Pat. No. 4,432,151.

[51] **Int. Cl.** ..... G09F 3/18

[52] **U.S. Cl.** ..... 40/10 D; 211/76;  
211/131; 40/493; 206/45.34

[58] **Field of Search** ..... 40/152.1, 505, 10 D,  
40/358, 324, 493; 206/45.34; 220/23.86;  
211/131, 78

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*Primary Examiner*—Gene Mancene

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*Attorney, Agent, or Firm*—McCoy & Morris

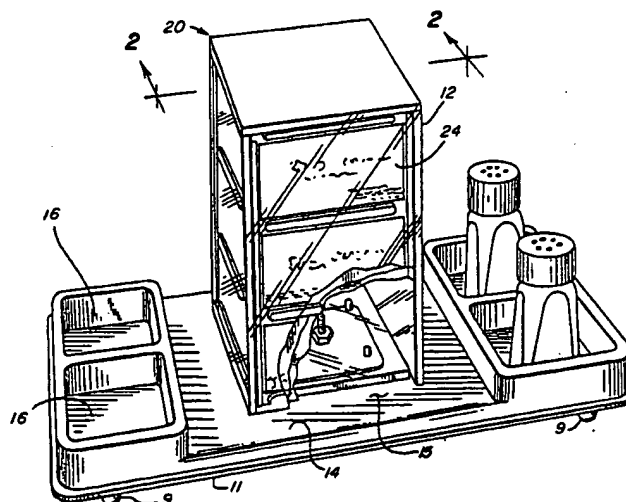
[57] **ABSTRACT**

An advertising display apparatus comprising a base, means on the base for holding condiments, a plurality of support members on the base, each facing in a different respective direction, means for mounting at least one advertisement on each support member, means mounting the support members for movement relative to the base to change the direction in which a given advertisement faces.

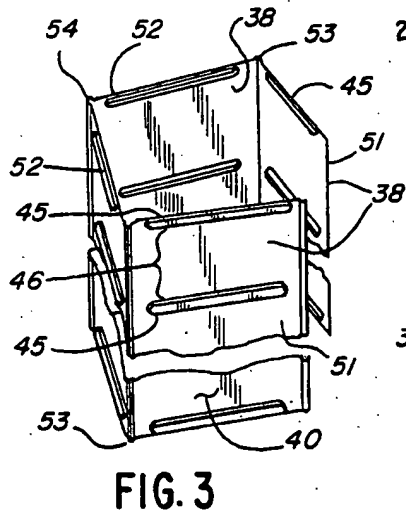
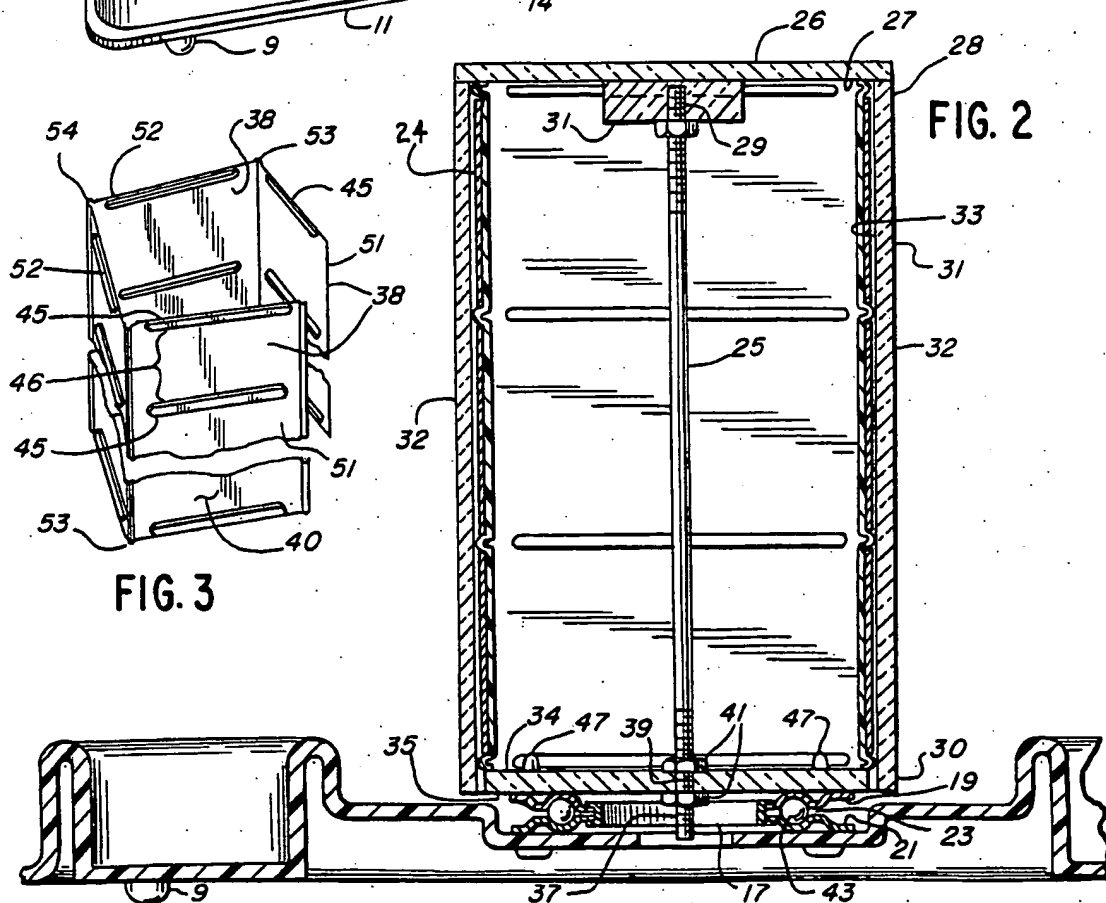
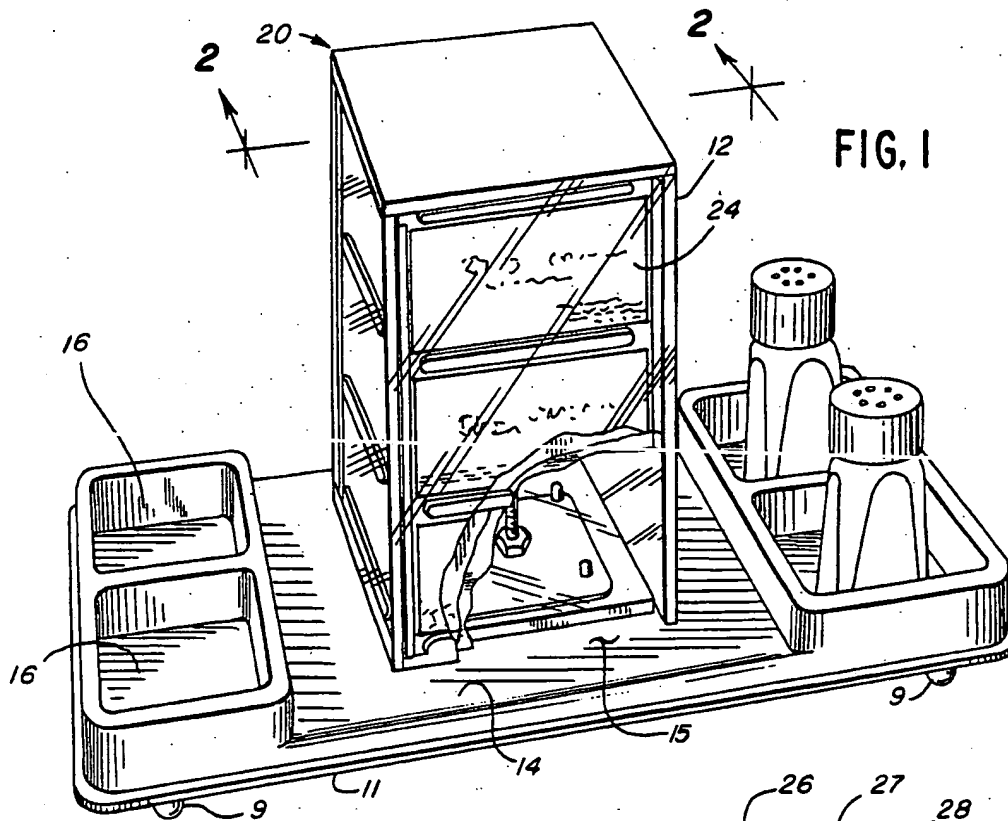
A hollow, transparent tube having a plurality of walls constitutes transparent cover means for enclosing and protectively covering the support members. Each support member and its respective advertisement faces a respective wall on the tube. A resilient, strip-like member is located within the tube and is resiliently deformable between an expanded, open first condition and a second condition in which it is at least partially closed for urging the advertisement toward its respective wall on the tube. The apparatus is preferably displayed on restaurant tables so that customers can view the advertisements during their meal.

The tube is of a size which preferably accommodates twelve business cards; three cards per support member.

**14 Claims, 3 Drawing Figures**



**Express Mail Number**  
**EV242440406US**



## ADVERTISING DISPLAY APPARATUS

This is a continuation-in-part of application Ser. No. 403,575, filed July 30, 1982, now U.S. Pat. No. 4,432,151.

### BACKGROUND OF THE INVENTION

#### 1. Field of the Invention

The apparatus of the subject invention pertains to an advertising display device with a plurality of advertisements facing in different respective directions. The apparatus is preferably used on restaurant tables, so that the advertisements or menus can be viewed by customers during their meal.

#### 2. Description of the Prior Art

Restaurant customers are a "captive" audience for most types of advertisement media while they wait for and eat their food. It is not unusual to find on restaurant tables paper displays for soft drinks and the like, and even placemats containing information to read or puzzles to solve.

Nowhere has there been provided in restaurants an advertising display apparatus which compactly advertises the services and products of a plurality of businesses on each table. If such a device were available, the "captive" audience would become a huge market for products and services. Obviously, restaurant owners as well as the advertisers could greatly benefit from the use of such an apparatus.

### SUMMARY OF THE INVENTION

An advertising display apparatus comprising a base, means on the base for holding condiments, a plurality of support members on the base, each facing in a different respective direction, means for mounting at least one advertisement on each support member, means mounting the support members for movement relative to the base to change the direction in which a given advertisement faces.

A hollow, transparent tube having a plurality of walls constitutes transparent cover means for enclosing and protectively covering the support members. Each support member and its respective advertisement faces a respective wall on the tube. A resilient, strip-like member is located within the tube and is resiliently deformable between an expanded, open first condition and a second condition in which it is at least partially closed for urging the advertisement toward its respective wall on the tube.

The apparatus of the subject invention may be used without the base condiment holding means. In the preferred embodiment of the apparatus, each support member comprises three to four display sections. Each display section holds one business card. Thus, the apparatus is capable of simultaneously displaying twelve to sixteen business cards. Any number of cards is theoretically possible to use with each support member; however, it is desirable to use no less than two cards, and no more than four cards for each support member. In addition, a single card, advertisement of menu could be attached to a support member.

The size of the base is approximately 12½" long by 6½" wide. The size of the tube is approximately 4" square by 6½" high, using three cards per support member. The apparatus is reusable, lightweight, easy to clean, simple in design, and economical to manufacture.

These and other advantages of the invention will become apparent to those of ordinary skill in the art with reference to the further detailed description of this invention.

### DESCRIPTION OF THE DRAWING

FIG. 1 is a perspective view of the vertically disposed tube embodiment of the advertising display apparatus;

FIG. 2 is an elevational, partial sectional view along Line 2—2 of FIG. 1; and,

FIG. 3 is a partial perspective view of the resilient striplike means which comprises four hingedly connected support panels.

### DESCRIPTION OF THE PREFERRED EMBODIMENT

Referring to FIG. 1, there is shown a perspective view of the preferred embodiment of the advertising display apparatus. The apparatus comprises a substantially flat, rectangularly shaped base 14 having a top surface 15. Base 14 also comprises a plurality of condiment holding means or sections 16 which are separated from each other on either end of said base by advertising display means 20. Condiment holding means 16 can hold sugar, salt, pepper and the like. Obviously, any number of condiment holding sections can be provided on the base depending upon the size of the base. Four short legs 9 may be attached to bottom surface 11 of base 14; however, the use of the legs are optional.

Advertising display means 20 comprises means for displaying a plurality of advertisements, such as business cards 24, menus (not shown) and the like. Advertising display means 20 further comprises a single integral transparent cover means which encloses and protects the business cards. Cover means comprises a hollow, vertically disposed tube 12 having a plurality of walls and having a rectangular horizontal cross-section. Tube 12 comprises a top end 28, a bottom end 30, a top piece 26 having a bottom surface 27, a bottom piece 34 having a bottom surface 35, and four (4) side pieces 32. Top piece 26 and side pieces 32 form a solid integral unit. Top piece 26 is permanently attached to tube 12. Each side piece 32 comprises an outer surface 31 and an inner surface 33. Bottom piece 34 is permanently attached with rivets 47 to a metal "lazy susan" device 17. A long threaded rod 25 is permanently attached at one end to the bottom surface 27 of top piece 26 by threading and gluing rod end 29 into a small plastic block 31 which is glued to the bottom surface 27.

A plurality of support members, or panels 38, are each hingedly connected to at least one other panel, there being a panel for each wall on the tube and each panel faces in a different respective direction. The panels comprise means for displaying a plurality of advertisements. Each panel 38 is vertically disposed contiguous to a respective inside wall 33 of a side piece 32. Each panel 38 faces a different respective direction when in place in tube 12. Each panel 38 has an outside surface 40. The outside surface 40 faces the inside wall 33 of a respective side piece 32. Each panel comprises means for mounting at least one advertisement and comprises a plurality of display sections 46. The display sections are formed by a plurality of ridges 45 which comprise means for displaying an advertisement facing in the same direction. Thus, a standard sized business card can fit between any two ridges. The cards may be removed and replaced with other cards without remov-

ing the remaining cards. The cards are removably mounted to each section 46 with "artist's" glue.

The plurality of support members or panels 38 are incorporated or integrated into a strip-like means or member for urging the advertisement on each support member toward its respective wall on the tube. The sheet of rigid, but resiliently deformable plastic is deformable between an open first condition and a second condition in which the strip is at least partially closed, when it is placed inside the tube cavity. The strip-like member comprises at least one inside panel 52 and a pair of end panels 51, each end panel having an unconnected outer edge and an inner edge connected to an inside panel. End panels 51 are joined to inside panels 52 at edges 53. Inside panels 52 are joined at edge 54. The expansion of the strip when it is within the tube is due to the inherent expanding force in the panels when the edges 53 and 54 are made by bending a straight strip at edges 53 and 54. This expanding force simultaneously pushes, or urges each panel, in an outwardly direction against the inside surface 33 of each wall 32. Thus, when panels 38 are mounted in the tube, they stay in a fixed position against their respective side walls until they are removed through the bottom end 30 of tube 12 for movement relative to the base to change the direction in which a given advertisement faces, and they conform substantially to the shape of the tube when it is in the second condition. The outer edge of end panels 51 are substantially adjacent to each other when the strip-like member is in its second partially closed position. After the panels are placed in tube 12, the tube is placed over and adjacent to bottom piece 34 and rod end 37 is placed through hole 39 in the center of the bottom piece 34. Two nuts 41 are then used to secure the tube to bottom piece 34. The purpose of this design is to make the tube relatively tamper-proof.

Tube 12 is rotatably mounted to top surface 15 of base 14 so that the direction in which a given card faces may be easily changed. Mounting tube 12 to base 14 is accomplished by using a "lazy susan" device 17 which comprises an upper and lower piece of galvanized steel 19 and 21, respectively, which form a hollow tube 23 of a size adapted to permit a plurality of steel ball bearings 43 to freely rotate therein. Upper piece 19 is bolted to bottom surface 35 of bottom end 34, and the lower piece 21 is bolted to top surface 15 of base 14. Tube 12 is free to rotate about base 14 with a minimum of friction so that each side of tube 12 may be easily viewed at any desired position by the customer.

The strip-like panel or member is approximately 14½" long by 6½" wide and is made out of rigid plastic to ensure durability. Each panel is approximately 3½" wide and each section is approximately 2½" x 3½". Cardboard may be used in place of the plastic support members, however, in such a case each advertisement should be permanently glued thereto. If an advertiser wishes to use two or more support sections this can be easily accomplished by deleting one more support ridges 46 from a support member 38.

The apparatus is preferably constructed out of a plastic material Lucite™. It may be assembled by gluing the individual pieces together, or it may be molded by conventional molding techniques into a one piece base and/or a one piece tube.

In the preferred embodiment of the apparatus, twelve cards are displayed at one time. Obviously, a longer tube 12 may be used to accommodate more cards; how-

ever, a four "tier" tube is the maximum desirable height and a two "tier" tube is the minimum desirable height.

Referring to FIG. 1, the size of base 14 is approximately 12½" long by 6½" wide although the use of condiment holding sections is optional, which would then shorten the length of the base. Additionally, the size of tube 12 is approximately 4" square by 6½" high, but it also may function adequately by showing two cards per side to four cards per side rather than three cards per side. Obviously, the size and height of the tube may vary according to the available area on which the display apparatus is used.

In the preferred embodiment of the apparatus, individual business cards are used. One may use, however, other suitable advertising means, such as a single card of a size adapted to fit onto the entire area of one side of the support member.

The apparatus is reusable, lightweight, easily cleaned, simple in design and economical to manufacture.

The foregoing description and drawing merely explains and illustrates the invention and the invention is not limited thereto, except insofar as the independent claims are so limited is those who are skilled in the art and have the disclosure before them will be able to make modifications and variations therein without departing from the scope of the invention.

What is claimed is:

1. In combination:

a base;

a plurality of support members, removably mounted on said base, each support member facing in a different respective direction;

means for mounting at least one advertisement on each of said support members;

means mounting said support members for movement relative to said base to change the direction in which a given advertisement faces;

a hollow, transparent tube having a plurality of walls and constituting transparent cover means for enclosing and protectively covering said support members;

each support member and its respective advertisement facing a respective wall on said transparent tube;

said support members, when attached together, form a resilient, strip-like member having a first outer edge and a second outer edge; and,

said resilient, strip-like member is located within said tube and is resiliently deformable between an expanded, open first condition and a second condition in which said first edge and said second edge are substantially adjacent to each other and said strip-like member is at least partially closed for urging the advertisement toward its respective wall on the transparent tube.

2. A combination as recited in claim 1, and further comprising:

means on said base for holding condiments.

3. A combination as recited in claim 2, wherein said condiment holding means comprises:

a plurality of condiment holding sections separated from each other by said tube.

4. A combination as recited in claim 1 and further comprising:

means removably mounting said cover means relative to said support members.

5. A combination as recited in claim 1 wherein said resilient strip-like member comprises:

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a plurality of panels each hingedly connected to at least one of other panel, there being a panel for each wall on said transparent tube.

6. A combination as recited in claim 5, wherein: said plurality of panels comprises at least one inside panel and a pair of end panels, each end panel having an unconnected outer edge and an inner edge connected to an inside panel.

7. A combination as recited in claim 6, wherein: said resilient strip-like member conforms substantially to the shape of said hollow tube when the strip-like member is in its second condition.

8. In the combination as recited in claim 5, wherein each panel comprises:

a plurality of display sections, each section comprising means for displaying an advertisement facing in the same direction.

9. A combination as recited in claim 5, wherein each panel comprises:

at least one display section comprising means for displaying an advertisement.

10. A combination as recited in claim 5, wherein each panel comprises:

means for removably mounting said advertisements.

11. A combination as recited in claim 5, wherein:

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each panel is vertically disposed and faces in a different respective direction;

means on each of said panels for mounting a plurality of advertisements, one above the other; and,

a vertically disposed, transparent cover means for protectively covering the advertisements on all of said plurality of panels.

12. A combination as recited in claim 11:

said cover means comprises a tube having a rectangular horizontal cross-section;

said plurality of panels are disposed on the inside of said tube, there being one panel facing each of the four walls of said tube;

said mounting means for the advertisements comprises means for mounting said advertisements between a respective panel and the corresponding tube wall toward which said panel faces; and, said strip-like member normally urging each of said panels toward its correspondent tube wall.

13. A combination as recited in claim 1, wherein: said transparent cover means is a single integral member.

14. A combination as recited in claim 1, wherein said cover means and said strip-like member are movable relative to the other.

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**United States Patent** [19]  
**Hepburn**

[11] **Patent Number:** 4,927,041

[45] **Date of Patent:** May 22, 1990

[54] **SELF-STABILIZING FLOATING COOLER**

[76] **Inventor:** Michael J. Hepburn, 5806 Old Lodge Dr., Houston, Tex. 77066

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[22] **Filed:** Jul. 15, 1988

[51] **Int. Cl.<sup>3</sup>** ..... B65D 1/24; A01K 97/00

[52] **U.S. Cl.** ..... 220/20; 43/54.1

[58] **Field of Search** ..... 220/20; 43/55, 54.1, 43/56

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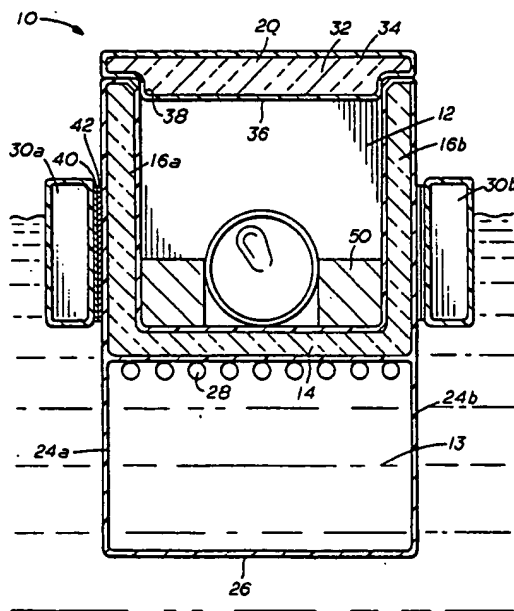
**Primary Examiner**—A. Michael Chambers

**Attorney, Agent, or Firm**—Bernard A. Reiter

[57] **ABSTRACT**

A self-stabilizing floating cooler. The cooler includes a pair of upstanding, opposed end panels and elongated side panels extending therebetween to form a contiguous wall. A lid and a bottom panel are provided, and a floor panel is disposed between the lid and the bottom panel to define upper and lower compartments. The upper compartment is thermally insulated, and float members are detachably affixed to the side panels adjacent the floor panel exteriorly thereof. Perforations are provided in the lower compartment for filling the lower compartment with water to buoyantly stabilize the cooler in an upright position when the cooler is placed on water. Perforations also permit draining the water from the lower compartment when the cooler is removed from water.

**27 Claims, 3 Drawing Sheets**



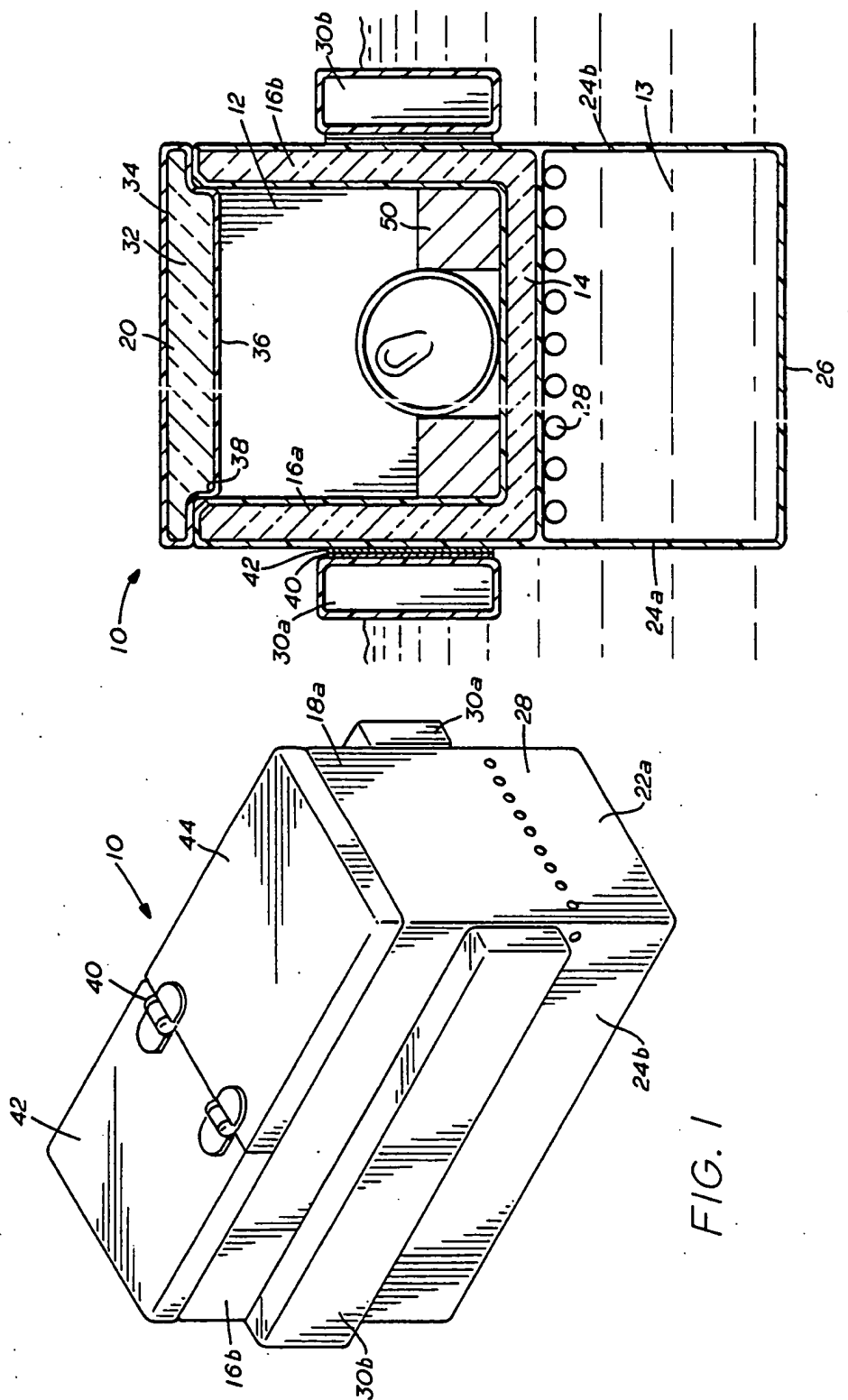


FIG. 2

FIG. 1

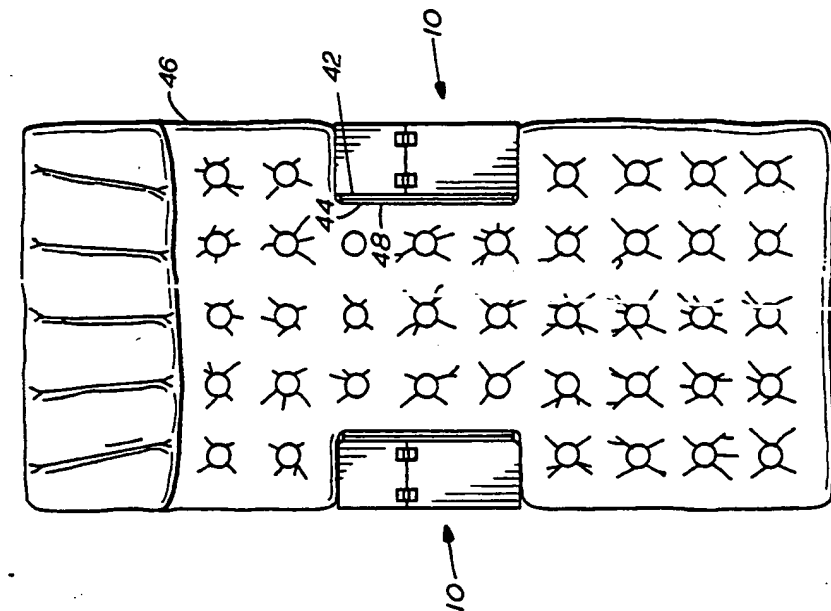


FIG. 4

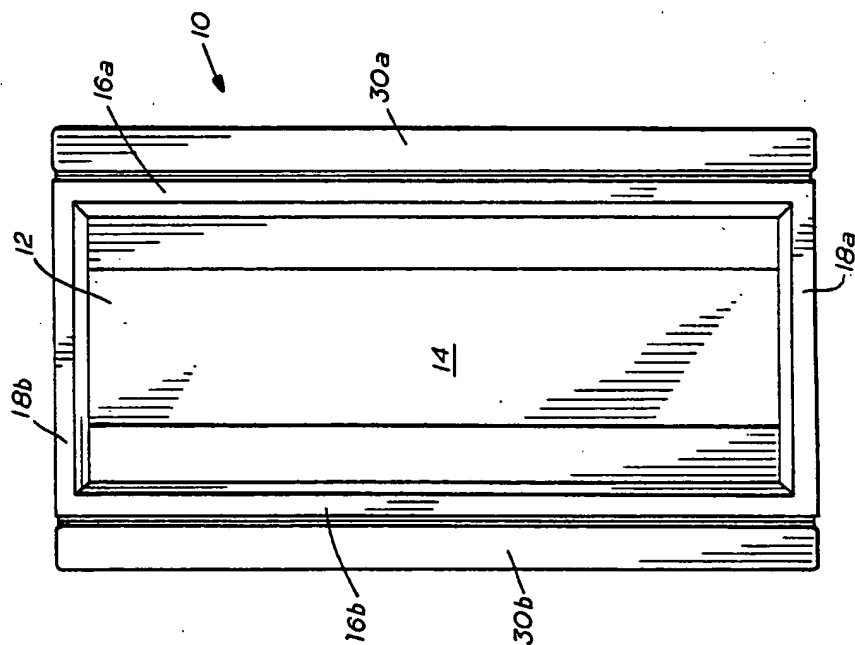


FIG. 3

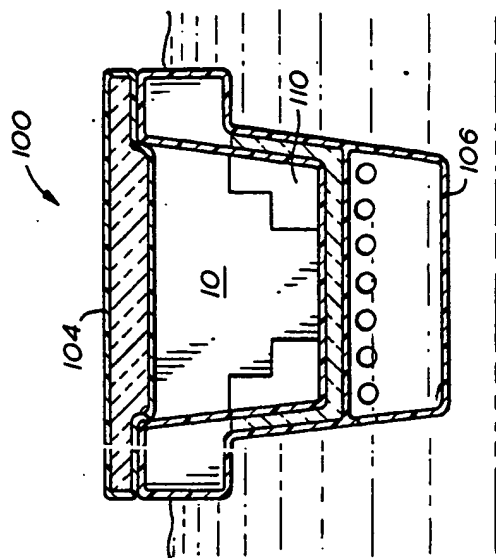


FIG. 6

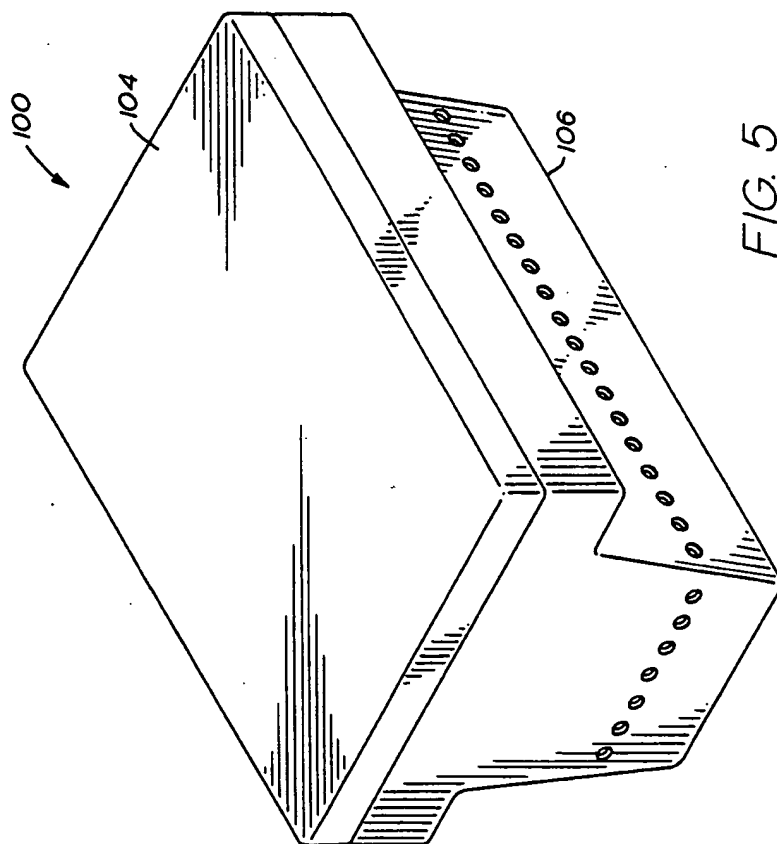


FIG. 5

## SELF-STABILIZING FLOATING COOLER

### 1. FIELD OF THE INVENTION

The present invention relates to coolers or ice chests which float on the surface of water, and more particularly to such coolers which are self-stabilizing to be maintained in an upright floating position.

### 2. BACKGROUND OF THE INVENTION

The use of personal floatation devices such as inflatable life rafts or burning rafts is a popular recreational pastime. In conjunction with the use thereof, it is frequently desired to carry provisions for food or drink maintained at a temperature below or above ambient. It is known to use insulated coolers that are removably attached to the raft or other floatation device. However, coolers heretofore known are generally unstable in the water. Such coolers will frequently take on water, particularly in rough water, which leaks into the interior of the cooler, and may even tip over and lose their contents.

Accordingly, there is a need for a floating cooler which is self-stabilizing even in rough water and which retains its contents in an upright position while maintaining a cool interior temperature.

### 3. SUMMARY OF THE INVENTION

The present invention provides a floating cooler which is self-stabilizing to inhibit listing and tipping over. The cooler of the present invention retains its contents in a relative upright position while maintaining an interior temperature which is cooler or warmer than ambient.

In its broadest aspect, the invention provides a self-stabilizing floating cooler. The cooler has a floor and a contiguous wall extending vertically therefrom made of an insulated material to define a storage cavity. A chamber is formed beneath the floor containing perforations for allowing the passage of water and air therethrough. The chamber fills with water when the cooler is placed therein to stabilize flotation thereof. The chamber is drainable of water when the cooler is removed therefrom. The cooler further includes flotation means mounted on the wall. To enhance stability, the chamber preferably has a depth that is at least one third as that of the cavity, and especially one half. A lid may be provided for engaging an upper end of the wall to enclose the cavity. The wall is preferably rectangular and includes a pair of opposed end sections and a pair of opposed, elongated sides. The floatation means desirably includes first and second elongated float members attached to the sides. The float members are preferably removably attached to the sides, e.g. with pressure sensitive adhering synthetic material such as VELCRO adhesive strips. The float members may be hollow, or constructed of a buoyant material such as, for example, cork, foamed plastic such as polystyrene, polyvinylchloride, and the like. The lid is preferably sealingly engageable with the upper end of the wall to form an essentially water tight closure therewith.

In another aspect the invention provides a self-stabilizing floating cooler. The cooler includes a pair of upstanding opposed end panels, and a pair of upstanding, opposed, elongated side panels extending therebetween to form a contiguous wall therewith. A lid is provided for engaging upper ends of the panels, at least a portion of the lid being removable. A bottom panel extends

between the end and side panels and a floor extends between the end and side panels to define therewith an upper storage compartment disposed between the floor panel and the lid. A lower compartment is disposed between the floor panel and the bottom panel. The lower compartment has a depth at least one third as that of the upper compartment and especially one half. Means are provided for thermally insulating the upper compartment. Float members are detachably affixed to the side panels adjacent the floor panel exteriorly thereof. Means are also provided for filling the lower compartment with water to maintain the cooler in an upright position when the cooler is placed in water. The filling means also serves as draining means to drain the water from the lower compartment when the cooler is removed from the water. The insulating means preferably includes insulated material constituting, or affixed to at least the floor panel and the end and side panels between the floor panel and the lid. The lid, the floor panel, and the end and side panels therebetween may include a thermally insulated material. The lid is preferably hinged between the end panels. The filling and draining means preferably includes perforations in the end and/or side panels disposed between the floor panel and the bottom panel. Preferably, the bottom panel is also perforated. The cooler may further include means disposed in the upper compartment for restraining movement of items placed therein, and especially to maintain the items spaced away from the side panels. The restraining means may be bumpers disposed adjacent the side panels, especially disposed adjacent the floor and side panels for maintaining beverage cans along a longitudinal centerline of the compartment.

### 4. BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a perspective view of a floating cooler according to the present invention.

FIG. 2 is a cross-sectional view of the cooler seen in FIG. 1 floating in the water.

FIG. 3 is a top view of the cooler of FIG. 1.

FIG. 4 is a top view of a personal raft to which the cooler of FIG. 1 is adapted to be removably attached.

FIG. 5 is a perspective view of another embodiment of a floating cooler according to the present invention.

FIG. 6 is a cross-sectional view of the cooler of FIG. 5.

### 5. DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

Referring now to the figures wherein like parts are indicated by like reference numerals, the cooler 10 has an upper compartment 12 and a lower compartment 13. The upper compartment 12 has a floor 14, opposed longitudinal sides 16a, 16b and opposed ends 18a, 18b. The ends 18a, 18b and the sides 16a, 16b form a contiguous wall extending vertically upward from the floor 14. The upper compartment 12 is sealed at the upper ends of this wall by lid 20. The floor 14, the sides 16a, 16b, the ends 18a, 18b and the lid 20 are insulated to provide thermal retention in the sealed compartment 12 for the storage of items desired to be kept above or below the ambient temperature.

The lower compartment 13 extends below the floor 14 and is defined by opposed ends 22a, 22b, opposed elongated sides 24a, 24b, and bottom panel 26. The side walls 24a, 24b and/or the ends 22a, 22b contain perforations 28 adjacent the floor 14 for the influx and draining

of water from the compartment 13. If desired, perforations 28 could alternatively or additionally be provided in bottom panel 26. Floatation means 30a,30b are affixed to the sides 16a,16b respectively.

An important aspect of the present invention is that the floor 14 is positioned between the lid 20 and the bottom panel 26 such that the depth of the lower compartment 13 is sufficient to assist in maintaining the cooler 10 in an upright position when the lower chamber 13 is filled with water, and the depth thereof is preferably one third to one half or more of the depth of the upper compartment. When the cooler 10 is placed in water, the lower compartment 13 fills with water which enters through the perforations 28 which perforations also allow for the exit of air displaced by the entering water. Filling of the lower compartment 13 with water provides thus a weighting of the lower portion of the cooler 10 and stability in the water. Generally, the larger the volume of the compartment 13 relative to that of the compartment 12, more stability of the cooler 10 when floating in the water. The perforations 28, or other suitable means for allowing entry and drainage of water between the compartment 13 and exterior of the cooler 10, should be sized and provided in number sufficient to permit entry of the water into the compartment 13, and conversely, drainage of the water from the compartment 13 when the cooler is removed from the water. On the other hand, the perforations 28 should be sized and numbered such that water from chamber 13 is not too rapidly drained therefrom else the stabilizing effect of the water-filled chamber 13 will not be realized. The cooler 10 is made more readily portable by removing the weight of the water from cavity 13 by drainage thereof through perforations 28.

If desired, a door or a port, or other similar means, may also be formed in one of the ends 22a,22b or the sides 24a,24b of the lower compartment 13 for the introduction into and removal from the lower compartment 13 of live bait or other objects desired to be submerged in water.

The insulated structural members of the cooler 10, the floor 14, the ends 16a,16b, the sides 18a,18b and the lid 20 may conveniently be constructed to include a core material 32 sandwiched between and exterior panel 34 and an interior panel 36 as best seen in FIG. 2. In this embodiment, the interior panel material 32 may be an insulative material such as cork, one or more foamed plastics, e.g. polystyrene, polyvinylchloride, polyurethane, etc. It is preferred that the insulative material 32 also be buoyant to assist in floatation of the cooler 10. The external panel 34 and the internal panel 36 serve to protect the core material 32 from the water, and the exterior and interior panels 34,36 may be constructed of any structurally rigid material which is impervious to water, such as, for example, polystyrene, polypropylene, polyethylene, and the like.

The length of the side panels 16a,16b is preferably relatively greater than the width of the end panels 18a,18b. It has been found that when the length of the side panels 18a,18b is at least three to four times as great as the width of the end panels 18a,18b, the stability of the cooler 10 is enhanced. Generally, the greater the length of the cooler 10 relative to its width, the better the floatation stability of the cooler 10.

The lid 20 desirably is securely affixed to the cooler 10 at the upper ends of the end panel 18a,18b and the side panels 16a,16b. The lid 20 may be secured to the walls 16a,16b,18a,18b by latches, or by providing an

inward peripheral lip 38 which is designed to fit snugly between the walls 16a,16b,18a,18b. The lid may be one continuous, rigid member, but is preferably hinged by hinges 40 as best seen in FIG. 1. The hinges 40 permit one side 42 or the other side 44 of the lid 20 to be opened while the other side remains closed. The side 42 or the side 44 may be formed integral with the adjacent sides 16a,16b and end 18a or 18b, may fit snugly as mentioned above or may be latched to the adjacent end 18a and/or 18b.

The floatation members 30a,30b provide buoyancy along the sides 16a,16b, respectively. The floatation members 30a,30b may be pontoons, i.e. hollow members, or may be manufactured of a buoyant material such as a foamed plastic or cork. The floatation members 30a,30b are preferably detachably affixed to the respective sides 16a,16b, for example, by providing VELCRO adhesive strips 40,42 attached to the floatation device 30a and 30b and the side 16a,16b, respectively. In this manner, the cooler 10 may be made attachable to a life raft 36 having a recess 44 formed in the contour thereof for receiving the cooler 10 at a similar VELCRO adhesive strip 48 which mates with the VELCRO adhesive strip 42 of the cooler 10, as best illustrated in FIG. 4.

The cooler 10 may be constructed by conventional techniques in the art. For example, the upper compartment 12 may be made by manufacturing the walls 16a,16b, the ends 18a,18b, and the floor 14 in one molding operation, by forming the lower cavity 13, i.e. the walls 24a,24b,22a,22b and the bottom panel 26, in another molding operation, and then attaching the bottom section to the top section with adhesives, thermal fusion, or the like. Alternatively, for example, the exterior shell of the cooler 10, i.e. the walls 16a,16b,18a,18b, 22a,22b,24a,24b and the bottom 26 may be formed from one mold and the remaining elements affixed thereto, e.g. by placing the floor member 14 and insulated material in place in the shell.

In another preferred embodiment, bumpers 50 are provided adjacent the sides 16a,16b. The bumpers 50 serve to maintain items placed in the upper compartment 12 along a longitudinal centerline thereof, spaced away from the walls 16a,16b. This serves to further enhance the stability of the device by inhibiting shifting of the contents from one side to the other. In a particularly preferred embodiment the space between the bumpers 50 is sufficient to accommodate a beverage container such as a can or bottle 52 as illustrated in FIG. 2. Alternatively, vertical partitions may be provided in the compartment 12 for this purpose.

In using the cooler 10, the contents in the compartment 12 will be warmer or cooler than ambient temperature as desired. Where a cooler than ambient temperature is desired for the contents of the compartment 12, ice or other coolant material may be added thereto as is conventional in the ice chest art. The cooler 10 is generally filled with the desired items placed in the compartment 12, and subsequently placed in the water. Initially, the cooler 10 may list to one side or the other until the lower compartment 13 fills with water and stabilizes the cooler in an upright position, assisted by the floatation members 30a,30b. The device may further be attached to a personal floatation device as described hereinabove, allowed to float freely, or tethered to an anchor, or person, or another floating or fixed object in or adjacent the water.

In an alternate embodiment illustrated in FIGS. 5 and 6, the cooler 100 is constructed similarly to the cooler 10 illustrated in FIGS. 1-4. In this embodiment, however, the sidewalls 102 taper inwardly from the top 104 toward the bottom 106. The floatation members 108 are formed integral with the wall 102 and extend longitudinally on either side of the cooler 100. The bumpers 110 are vertically stepped to form a relatively narrow longitudinal channel changed at a lower portion thereof, and a relatively wider longitudinal channel towards the upper portion thereof. This design of the cooler 100 is adapted for relatively larger coolers than the embodiment described in reference to FIGS. 1-4. The tapered walls 102 and the peripherally positioned float members 108 serve to provide additional buoyancy and stability as the bulk and weight of the contents in upper compartment 112 of the cooler 100 increase. In addition, the bumpers 110 function to assist a more central longitudinal disposition of the contents in the compartment 112 for greater stability whirl, floating in the water.

Having described the invention above by way of illustration, various modifications in the size, shape, materials, methods of construction and use will occur to those skilled in the art. It is intended that all such variations which fall within the scope and spirit of the appended claims be embraced thereby.

What is claimed is:

1. A self-stabilizing floating cooler, comprising:
  - a floor and contiguous wall extending vertically therefrom made of an insulated material to define a storage cavity;
  - a chamber for containing water formed beneath said floor, said chamber having perforations substantially adjacent said floor for allowing the passage of water and air therethrough, wherein the chamber fills with water when the cooler is placed therein to stabilize floatation thereof wherein said chamber has a depth at least one third that of said storage cavity and wherein the chamber is drainable of water when the cooler is removed therefrom; and floatation means mounted on said wall.
2. The cooler of claim 1 wherein the chamber has a depth at least as great as that of said cavity.
3. The cooler of claim 1, further comprising a lid for engaging an upper end of said wall to enclose said cavity.
4. The cooler of claim 1, wherein said wall is rectangular and includes a pair of opposed end sections and a pair of opposed, elongated sides.
5. The cooler of claim 4, wherein the floatation means include a first and second elongated float members attached to said sides.
6. The cooler of claim 5, wherein the float members are removably attached.
7. The cooler of claim 6, wherein the float members are removably attached with pressure sensitive adhering synthetic strips.
8. The cooler of claim 5, wherein the float members are hollow.
9. The cooler of claim 5, wherein the float members are constructed of buoyant material.
10. The cooler of claim 3, wherein the lid is sealingly engageable with the upper end of the wall to form an essentially water-tight closure therewith.
11. The cooler of claim 5, wherein the sides are slanted inwardly from an upper end of the wall toward the floor.

12. The cooler of claim 11, wherein the float members are affixed adjacent the upper ends of the sides.

13. The cooler of claim 12, wherein the float members are fixedly attached.

14. The cooler of claim 1, wherein the chamber includes means for introducing live bait thereinto and removing the live bait therefrom.

15. A self-stabilizing floating cooler, comprising:

a pair of upstanding, opposed end panels; upstanding, opposed elongated side panels extending between said end panels to form a contiguous wall therewith;

a lid for engaging upper ends of said panels, at least a portion of said lid being removable;

a bottom panel extending between said end and side panels;

a floor panel extending between said end and side panels to define therewith an upper storage compartment disposed between said floor panel and said lid, and a lower compartment disposed between said floor panel and said bottom panel, wherein said lower compartment has a depth at least one third that of said upper compartment; means for thermally insulating said upper compartment;

floating members affixed to said side panels adjacent said floor panel exteriorly thereof; and

means for filling said lower compartment with water to buoyantly stabilize the cooler in an upright position when the cooler is placed in water, and for draining said water from said lower compartment when the cooler removed from water.

16. The cooler of claim 15, wherein said insulating means includes an insulative material constituting or affixed to at least said floor panel and said end and side panels between said floor panel and said lid.

17. The cooler of claim 15, wherein said lid, said floor panel, and said end and side panels therebetween include a thermally insulative material.

18. The cooler of claim 15, wherein the lid is hinged between said end panels.

19. The cooler of claim 15, wherein said filling and draining means includes perforations in said end and/or said side panels disposed between said floor panel and said bottom panel.

20. The cooler of claim 19, wherein said bottom panel is perforated.

21. The cooler of claim 15, further including means disposed in said upper compartment for restraining movement of items placed therein.

22. The cooler of claim 21, wherein said restraining means maintains said items spaced away from said side panels.

23. The cooler of claim 22 wherein said restraining means includes bumpers disposed adjacent said side panels.

24. The cooler of claim 15, further comprising opposed longitudinal bumpers disposed adjacent said floor and said side panels for maintaining horizontally disposed beverage car's or bottles along the longitudinal center line of said upper compartment.

25. A self-stabilizing cooler comprising:

a floor and a contiguous wall extending vertically therefrom made of an insulating material to define a storage cavity;

a lid for engaging said contiguous wall opposite said floor;

float members affixed to said contiguous wall;

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a chamber for containing water formed beneath said floor, said chamber having perforations substantially adjacent said floor for allowing the passage of water and air therethrough, wherein said chamber fills with water when the cooler is placed in water to stabilize flotation thereof, and wherein said chamber is drainable of water when the cooler is removed from water.

26. A self-stabilizing floating cooler as recited in claim 25 wherein said float members are attachable to and detachable from said contiguous wall.

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27. A self-stabilizing cooler comprising:  
a floor and a contiguous wall extending vertically therefrom made of an insulating material to define a storage cavity;  
a lid for engaging said contiguous wall opposite said floor;  
float members affixed to said contiguous wall;  
a ballast containing chamber formed beneath said floor;  
means for filling and draining said ballast containing chamber.

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US006062380A

**United States Patent** [19]  
**Dorney**

[11] **Patent Number:** **6,062,380**  
 [45] **Date of Patent:** **May 16, 2000**

[54] **GLOW CUP SYSTEM**

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[21] **Appl. No.:** **09/342,402**

[57] **ABSTRACT**

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**Related U.S. Application Data**

[63] Continuation-in-part of application No. 09/080,150, May  
 18, 1998, abandoned.

[51] **Int. Cl.<sup>7</sup>** ..... **B65D 77/00**

[52] **U.S. Cl.** ..... **206/217; 206/459.1; 206/524.1;**  
 215/6; 362/34; 362/101

[58] **Field of Search** ..... 206/217, 219-221,  
 206/457, 524.1, 524.3, 524.6, 568, 459.1,  
 459.5; 215/379, 382, 383.6; 220/501; 362/34,  
 101, 154, 266, 318, 806

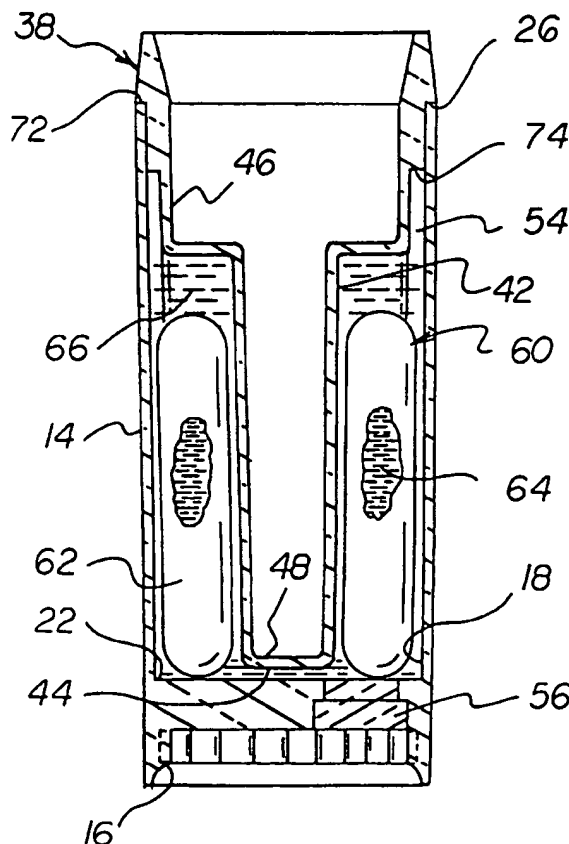
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**U.S. PATENT DOCUMENTS**

4,563,726 1/1986 Newcomb et al. .... 362/101  
 4,941,590 7/1990 Pantaleo et al. .... 206/217  
 5,171,081 12/1992 Pita et al. .... 362/34  
 5,769,680 6/1998 Hoffman ..... 206/217

A glow cup system with illumination capabilities. A container of a material which is deformable upon the application of pressure by a user's hand. The container is formed with an open top and a closed bottom and a side wall between the top and bottom. The side wall has a cylindrical wall extending from a location adjacent to the top downwardly to a location adjacent to the bottom and radially exterior of the side wall and with a circular member to form a seal at the bottom of the outer wall to totally close the space between the side wall and the outer wall. An insert of a plastic material is located within the space with an inner surface in proximity to the outer surface of the side wall. A recess is formed along one vertical extent and between the insert and a side wall. A fracturable ampule is vertically oriented within the recess and contains a first chemiluminescent fluid. A second chemiluminescent fluid is positionable within the space and is adapted to be illuminated upon the fracturing of the ampule and contact with the first chemiluminescent fluid.

**16 Claims, 11 Drawing Sheets**



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**EV242440406US**

FIG 1

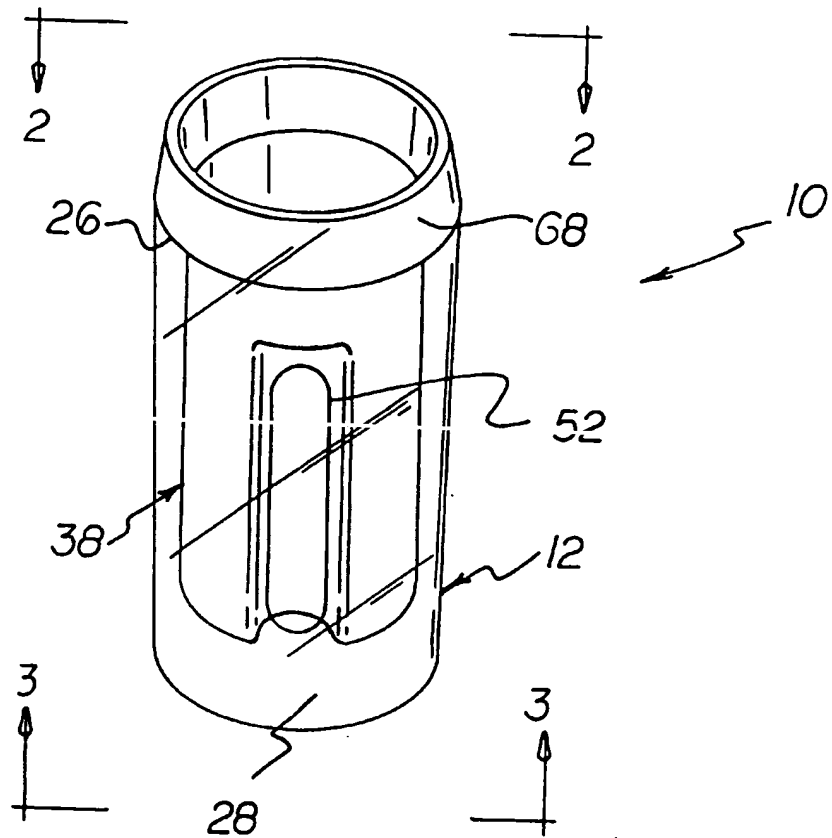
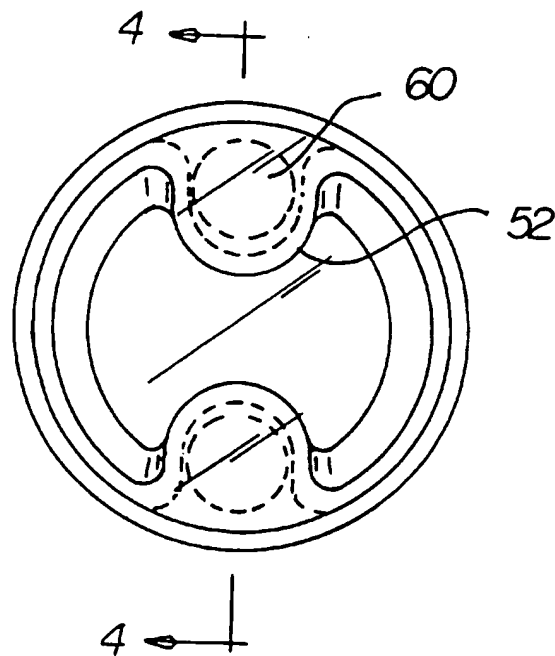


FIG 2



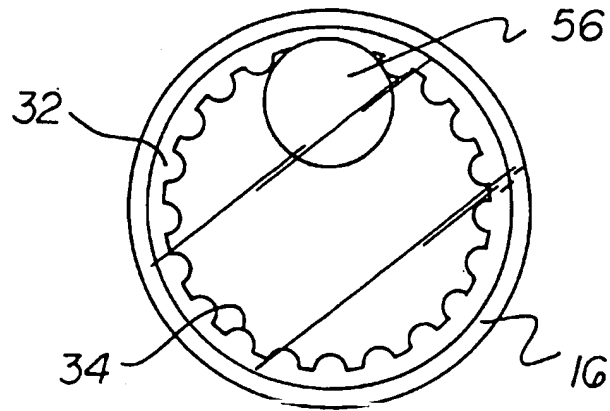


FIG 3

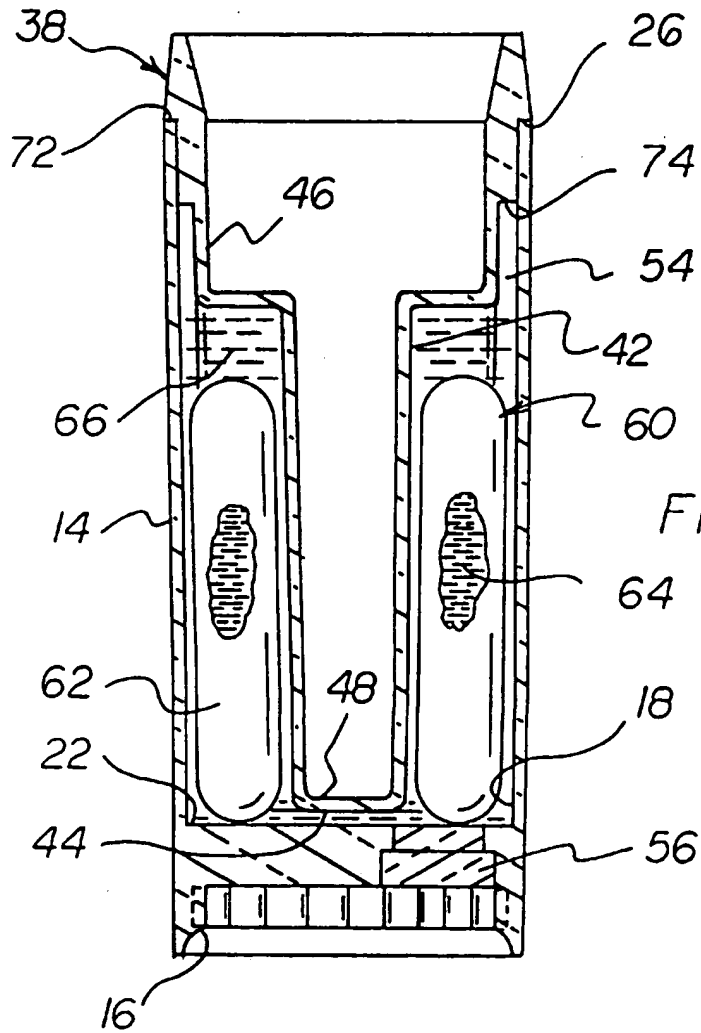


FIG 4

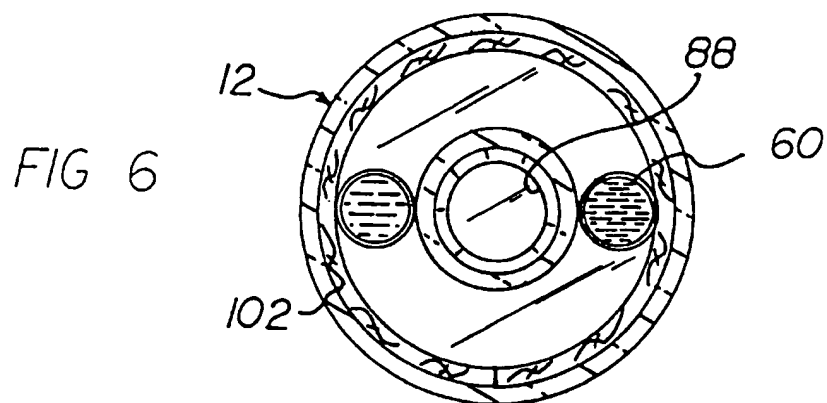
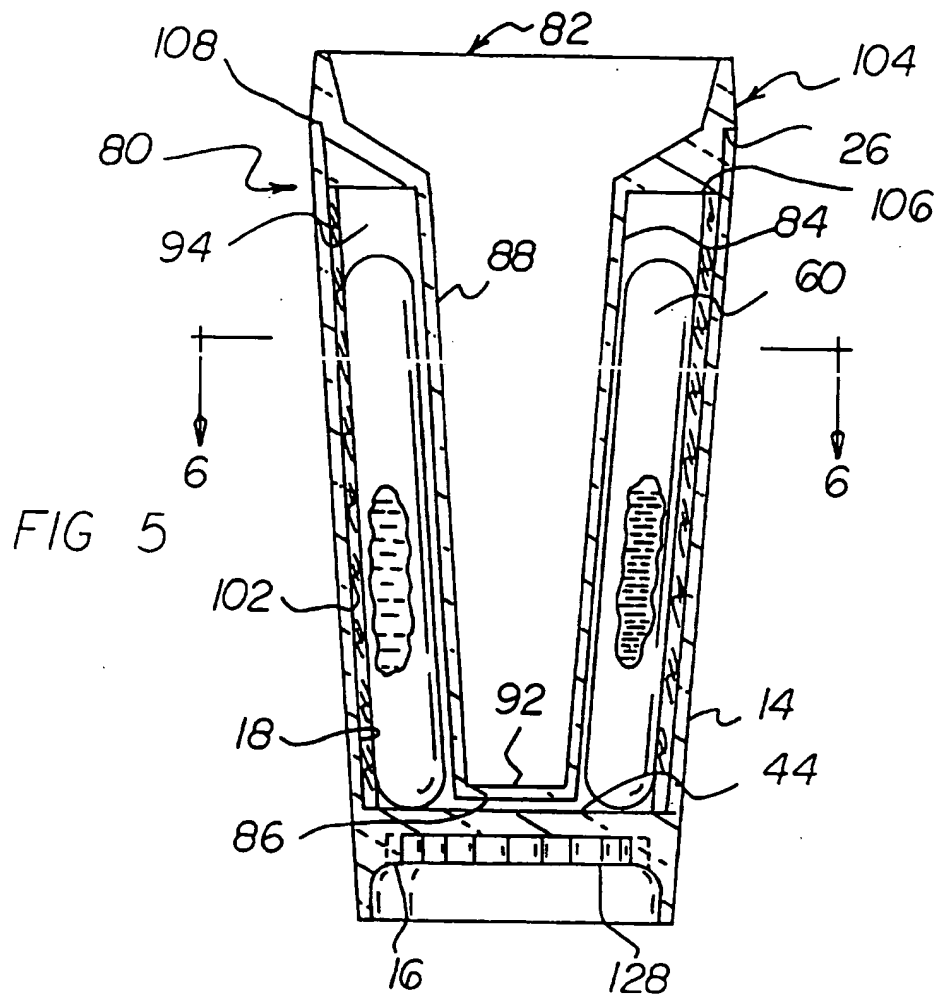


FIG 7

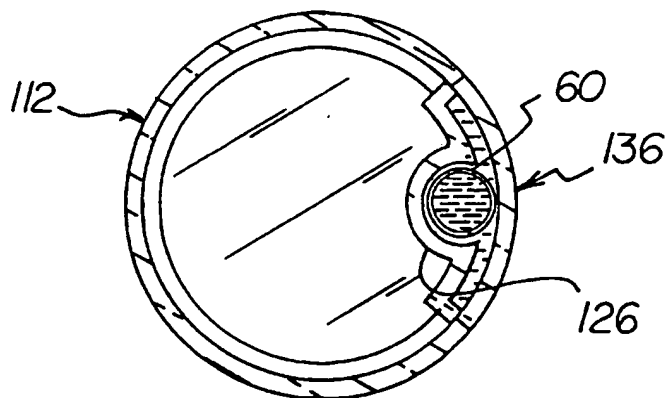
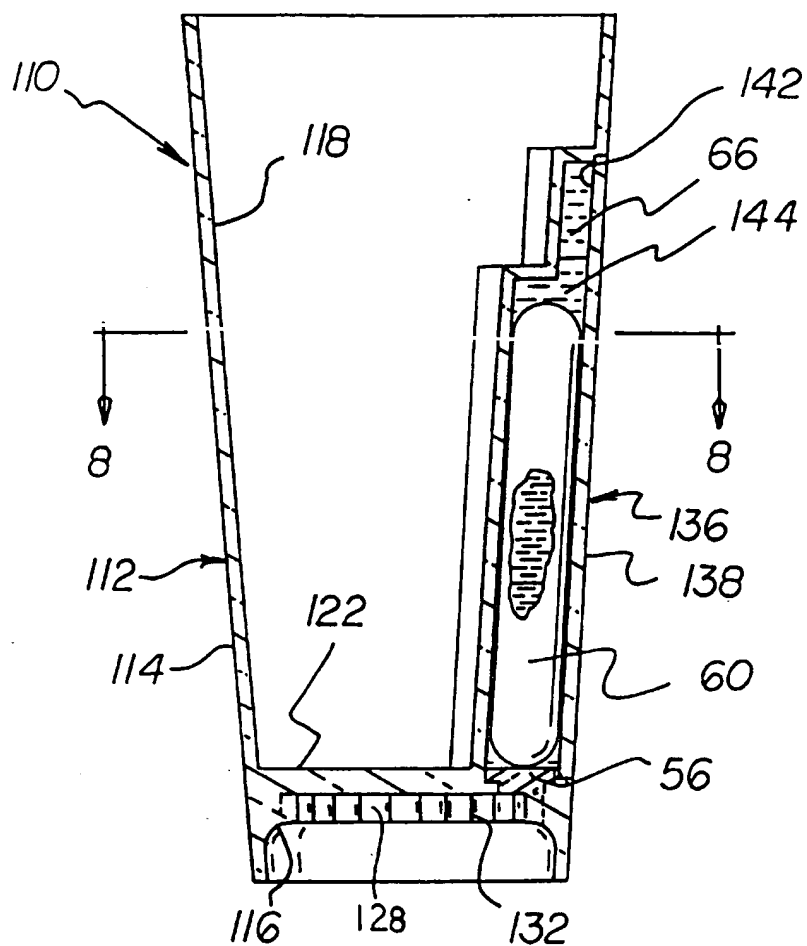


FIG 8

FIG 9

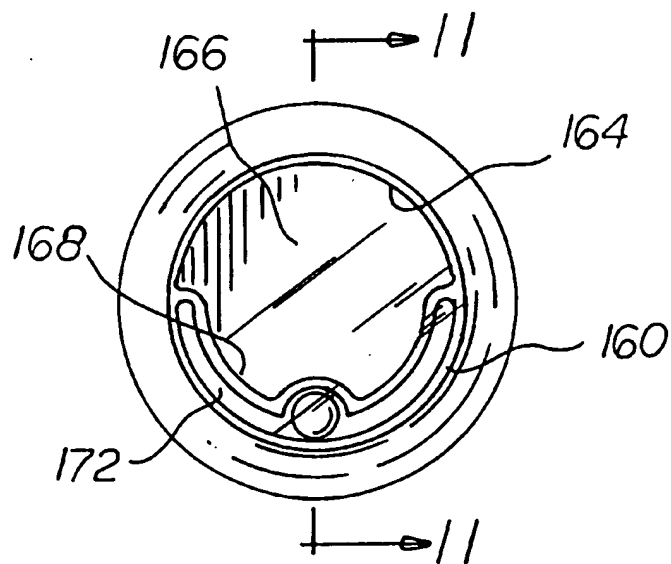
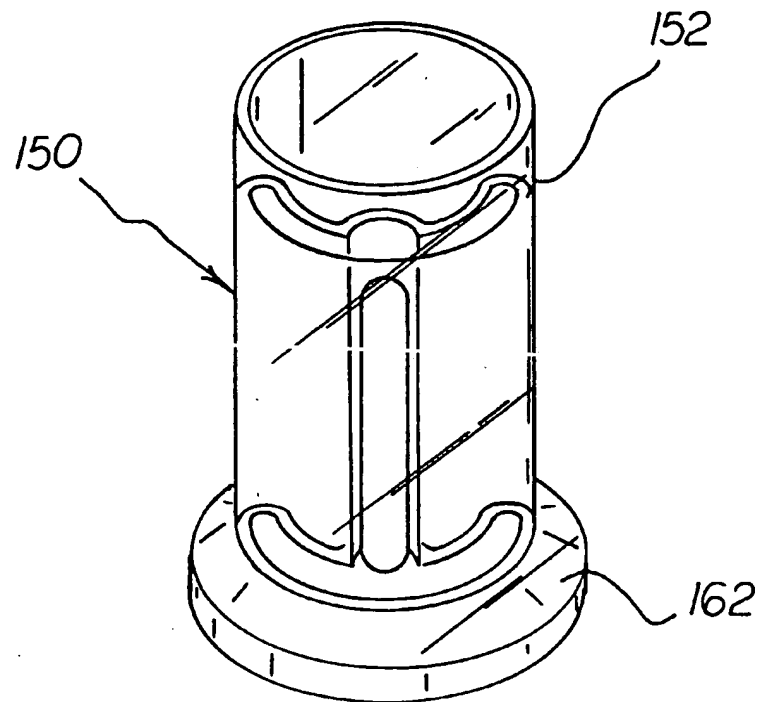
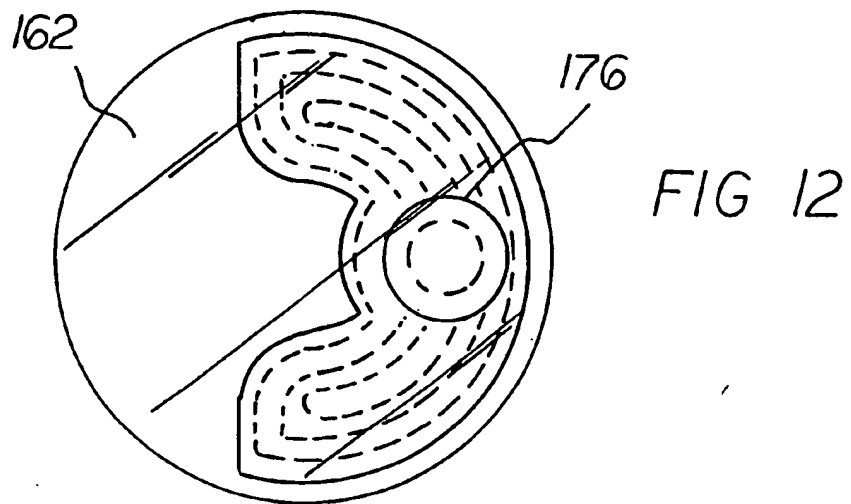
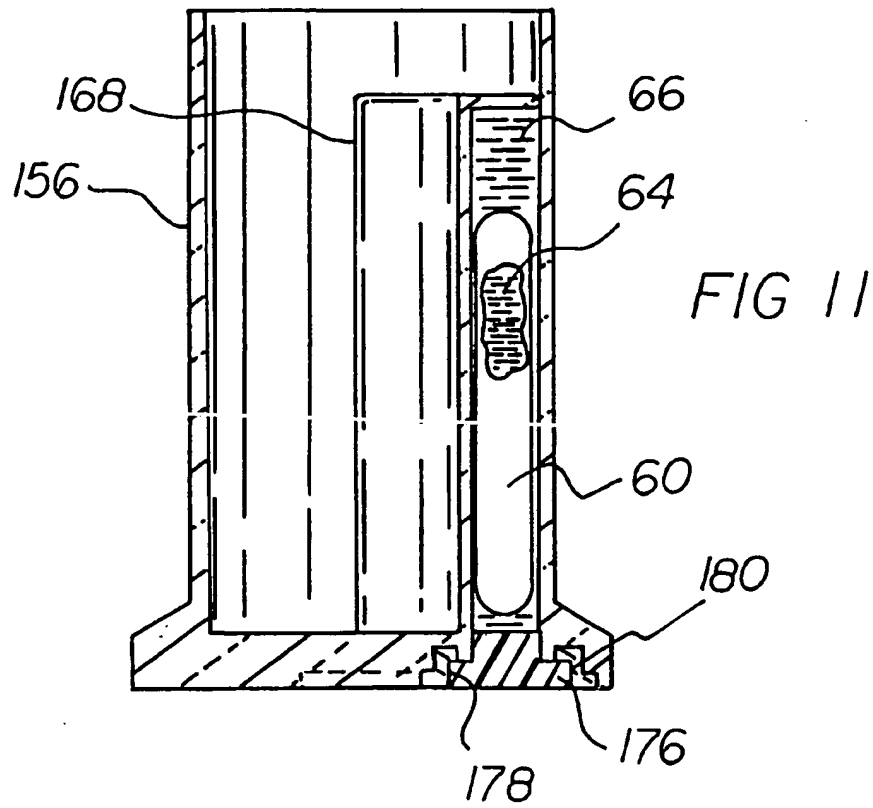
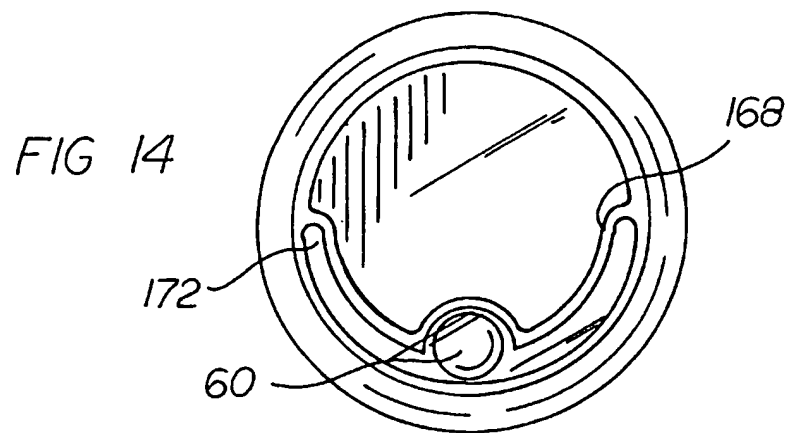
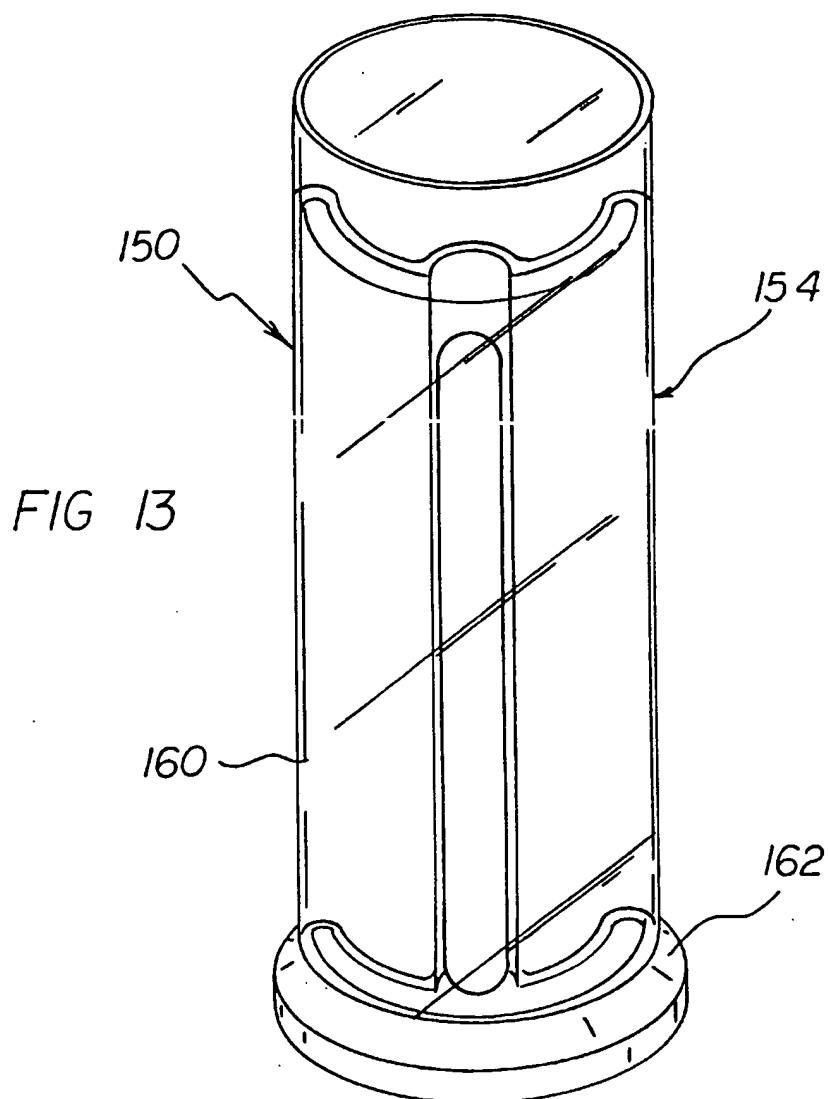
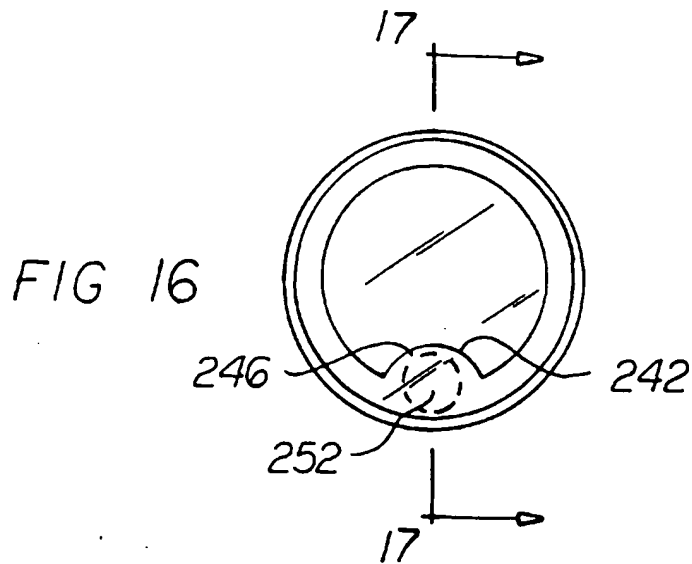
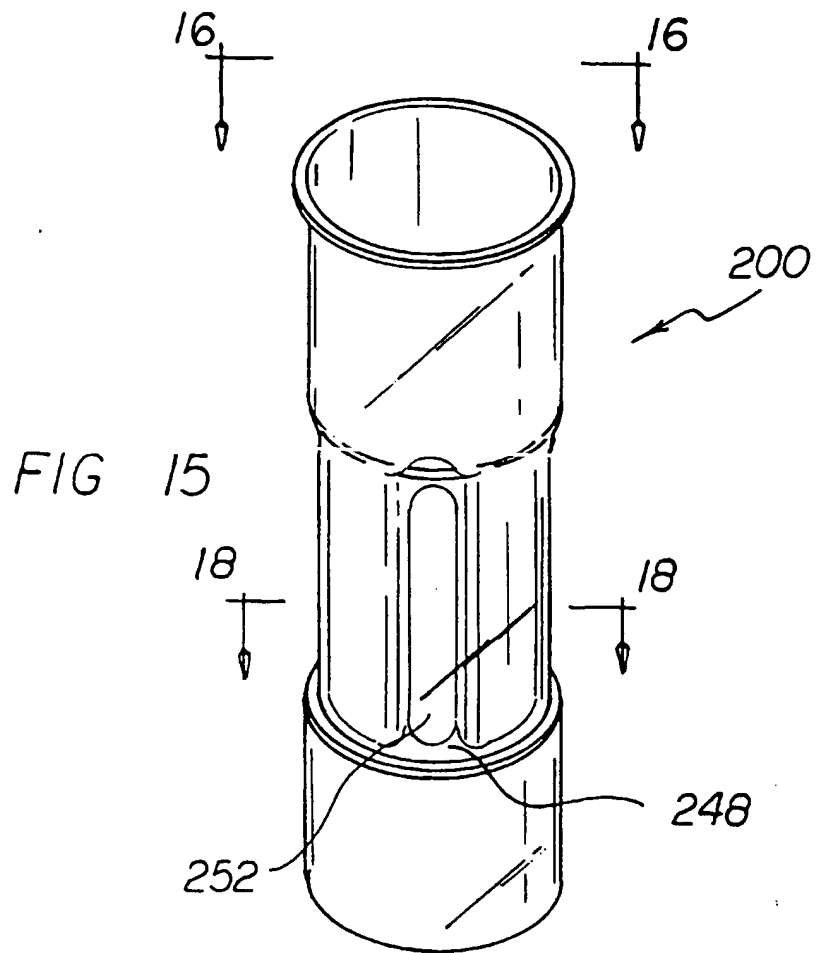
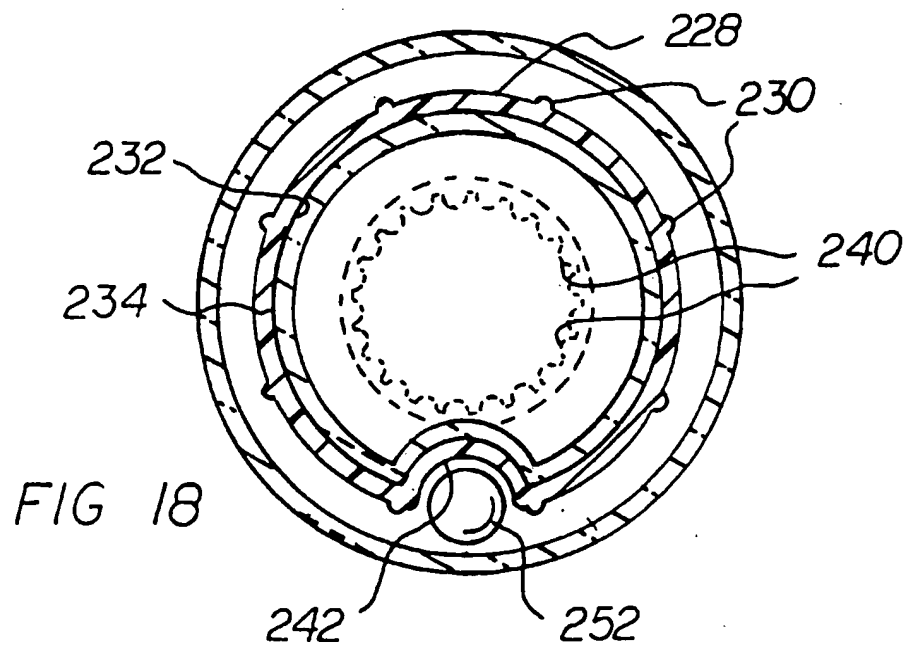
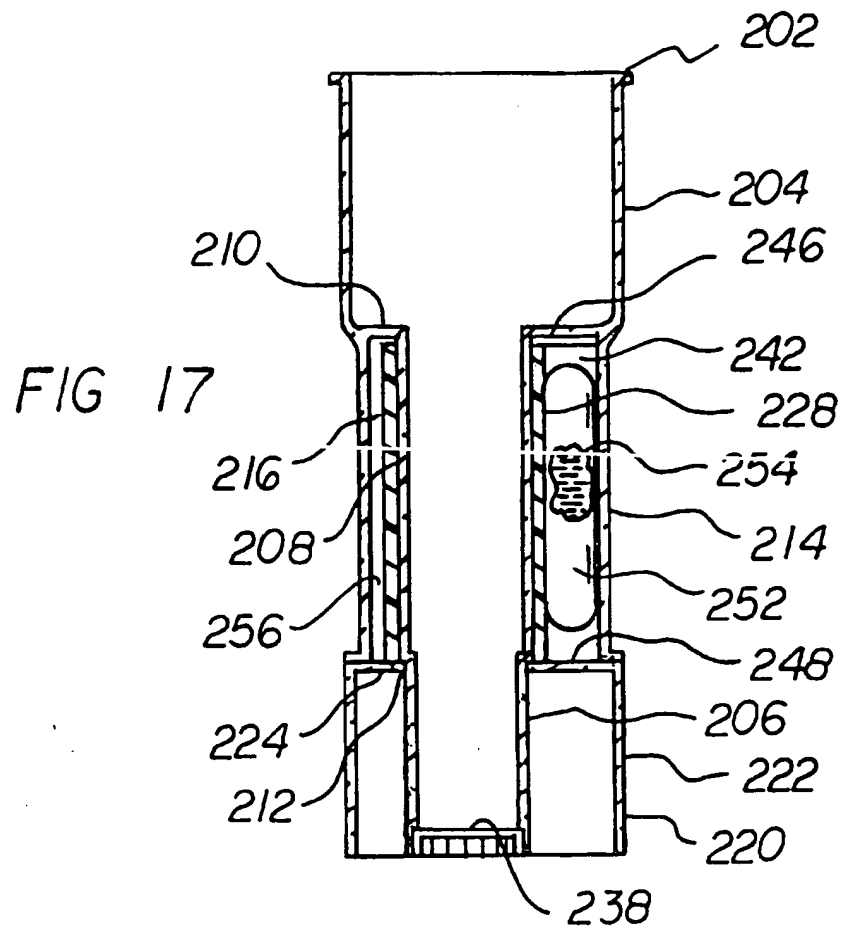


FIG 10









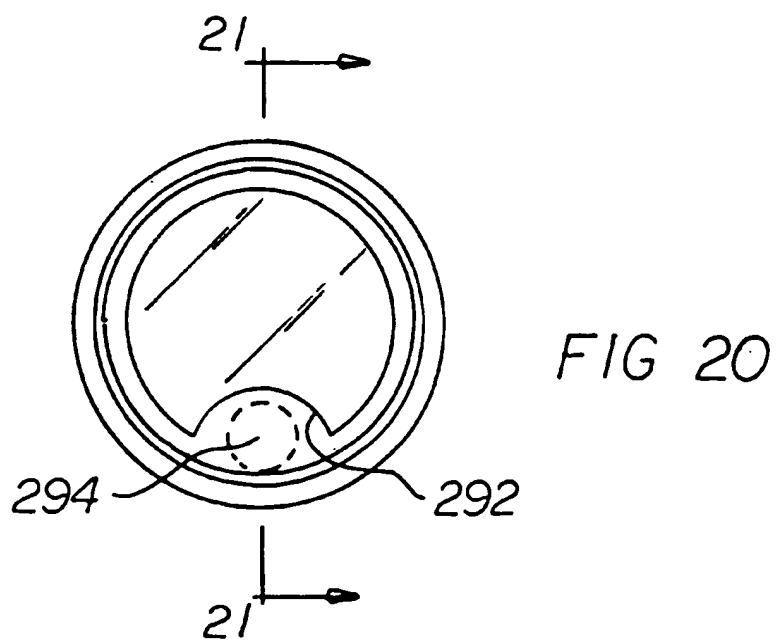
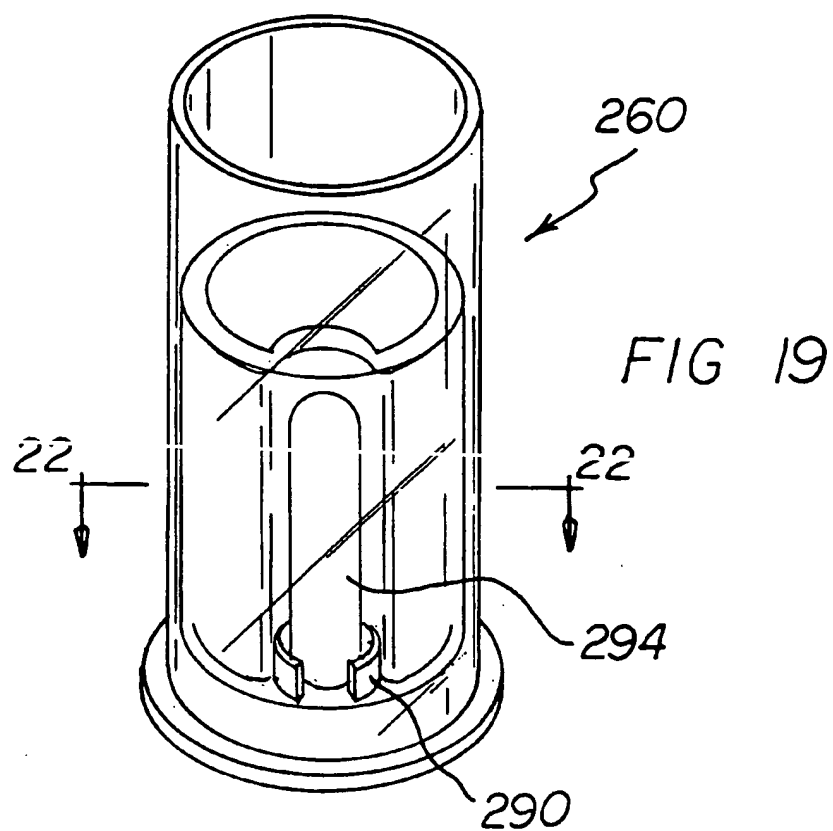


FIG 21

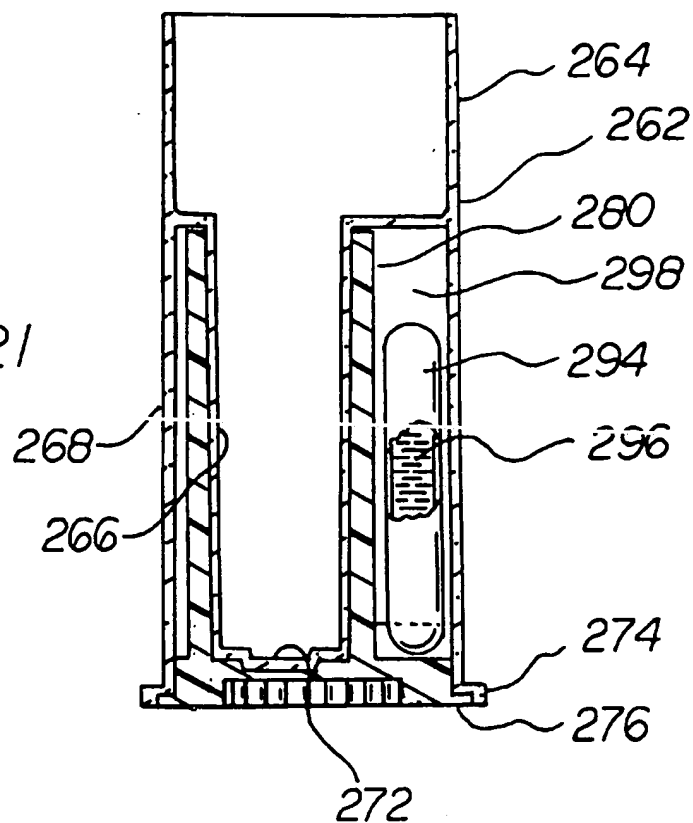
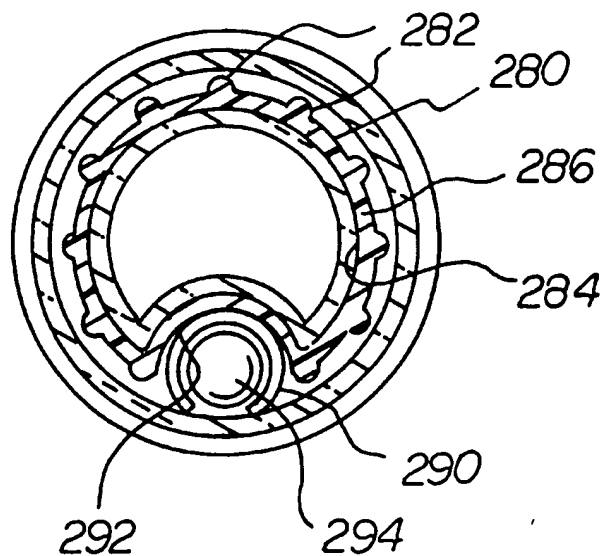


FIG 22



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## GLOW CUP SYSTEM

## RELATED APPLICATION

The present invention is a continuation-in-part of U.S. application Ser. No. 09/080,150 filed May 18, 1998, abandoned.

## BACKGROUND OF THE INVENTION

## 1. Field of the Invention

The present invention relates to an improved glow cup system and more particularly pertains to providing an illuminated drinking vessel and further providing a drinking vessel that can be used to open a twist off cap.

## 2. Description of the Prior Art

The use of an illuminated drinking vessel is known in the prior art. More specifically, illuminated drinking vessels heretofore devised and utilized for the purpose of eye pleasing effect are known to consist basically of familiar, expected and obvious structural configurations, notwithstanding the myriad of designs encompassed by the crowded prior art which have been developed for the fulfillment of countless objectives and requirements.

By way of example, the prior art includes U.S. Pat. No. 5,597,517 to Chopedekar, Rchleck, Guo and Hall discloses a two-composition chemiluminescent composition that is composed of an oxalate and an activator component.

U.S. Pat. No. 5,509,409 to Diehl discloses a stemmed drinking glass with an upper cup supported by a hollow stem and connected to a base that uses a chemiluminescent light stick inserted into the bellow stem to provide illumination.

U.S. Pat. No. 5,275,277 discloses a drinking glass that includes a side wall having a transparent circuitous path directed there along extending from entrance of the drinking glass to a second position in adjacency to floor portion of the drinking glass to indicate fluid level within the drinking glass structure.

U.S. Pat. No. 5,171,081 to Pita, Mershon and Muskat discloses a vessel container used in consumption of food and/or beverage that is chemiluminescent by means of inner and outer walls and at least two compartments for containing chemiluminescent reactive substances.

U.S. Pat. No. 5,067,051 to Ladyjensky discloses a chemiluminescent lighting element comprising a tube, closed at both ends, with at least two components which are filled with liquids which produce chemiluminescent light when mixed.

U.S. Pat. No. 4,814,949 to Elliott discloses a chemiluminescent device wherein a first polymeric sheet having a shaped cavity therein is sealed around its periphery to a second polymeric sheet and the cavity contains an absorbent article being of substantially the same shape as the cavity and a sealed receptacle containing a first liquid component of a chemiluminescent light composition and outside said sealed receptacle a second liquid component of a chemiluminescent light composition.

U.S. Pat. No. 4,595,437 discloses a method of producing a warmth keeping vessel made of ceramics or porcelain.

U.S. Pat. No. 4,563,726 to Newcomb et al discloses a one-piece illuminated drinking mug with an axially disposed light permeable tube attached integrally to the bottom, said tube adapted to receive a light strip.

U.S. Pat. No. 3,372,830 to Edwards discloses a double-walled container having interfitting inner and outer receptacles or wall portions which cooperate to provide an

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insulated and reinforced finger gripping section of the container as well as a novel stacking construction for a double-walled container.

Lastly, U.K. Patent GB 2,122,874 to Smith discloses receptacles, etc. with relatively rotatable walls.

In this respect, the glow cup apparatus according to the present invention substantially departs from the conventional concepts and designs of the prior art, and in so doing provides an apparatus primarily developed for the purpose of an illuminated drinking vessel and further providing a drinking vessel that can be used to open a twist off cap.

Therefore, it can be appreciated that there exists a continuing need for a new and improved glow cup apparatus which can be used for an illuminated drinking vessel and further providing a drinking vessel that can be used to open a twist off cap. In this regard, the present invention substantially fulfills this need.

## SUMMARY OF THE INVENTION

In view of the foregoing disadvantages inherent in the known types of illuminated drinking vessels now present in the prior art, the present invention provides an improved glow cup apparatus. As such, the general purpose of the present invention, which will be described subsequently in greater detail, is to provide a new and improved glow cup apparatus which has all the advantages of the prior art and none of the disadvantages.

To attain this, the present invention essentially comprises a first generally cylindrically shaped container being mildly compressible. The first generally cylindrically shaped container has a first outer wall communicating with a first outer bottom and a first inner wall communicating with a first inner bottom. The first outer wall and the first inner wall define a first upper edge and a first continuous wall space. The first inner bottom and the first inner bottom define a floor space. The first outer wall is extended a distance from the first outer bottom.

Also, the first outer bottom has a cylindrical recess projecting inwardly thereof. The cylindrical recess has an inner wall with a ribbed surface. The ribbed surface is sized and shaped to receive a twist off bottle cap.

A second generally cylindrically shaped container is provided. The second generally cylindrically shaped container has a second outer wall communicating with a second outer bottom. It also has a second inner wall communicating with a second inner bottom. The second outer wall has a pair of concave recesses symmetrically positioned thereabout. The second generally cylindrically shaped container is sized to be positioned within the first generally cylindrically shaped container and defines a spacing between the first and second container.

Included are a pair of ampules. Each of the ampules have a thin membrane. The pair of ampules form a first ampule and a second ampule. Each of the pair ampules contains a first chemiluminescent fluid. One of each of the pair of ampules is positioned within one of each of the pair of concave recesses of the second generally cylindrically shaped container. Each of the pair of ampules is retained within concave recesses when the second generally cylindrically shaped container is positioned within the first generally cylindrically shaped container.

Additionally, a second chemiluminescent fluid is sealed within the spacing between the first generally cylindrically shaped container and the second generally cylindrically shaped container.

An upper rim is formed about the second generally cylindrically shaped container. The upper rim has a first horizontal portion extending outwardly therefrom and a second horizontal portion spaced therefrom and extending from the upper rim. The first horizontal portion engages the upper edge of the first outer wall of the first generally cylindrically container. The first horizontal portion encloses the spacing of the first generally cylindrically shaped container and the second generally cylindrically shaped container.

Finally, the first generally cylindrically shaped container has a force applied to the a first outer wall to compress the first inner wall. The force presses the first inner wall against the pair of ampules to rupture the thin membrane. The thin membrane of the pair of ampules, when ruptured, allows the first chemiluminescent fluid to flow into the spacing and mix with the second chemiluminescent fluid to produce a chemiluminescent reaction.

There has thus been outlined, rather broadly, the more important features of the invention in order that the detailed description thereof that follows may be better understood, and in order that the present contribution to the art may be better appreciated. There are, of course, additional features of the invention that will be described hereinafter and which will form the subject matter of the claims appended hereto.

In this respect, before explaining at least one embodiment of the invention in detail, it is to be understood that the invention is not limited in its application to the details of construction and to the arrangements of the components set forth in the following description or illustrated in the drawings. The invention is capable of other embodiments and of being practiced and carried out in various ways. Also, it is to be understood that the phraseology and terminology employed herein are for the purpose of description and should not be regarded as limiting.

As such, those skilled in the art will appreciate that the conception, upon which this disclosure is based, may readily be utilized as a basis for the designing of other structures, methods and systems for carrying out the several purposes of the present invention. It is important, therefore, that the claims be regarded as including such equivalent constructions insofar as they do not depart from the spirit and scope of the present invention.

It is therefore an object of the present invention to provide a new and improved glow cup apparatus which has all the advantages of the prior art illuminated drinking vessels and none of the disadvantages.

It is another object of the present invention to provide a new and improved glow cup apparatus which may be easily and efficiently manufactured and marketed.

It is a further object of the present invention to provide a new and improved glow cup apparatus which is of a durable and reliable construction.

An even further object of the present invention is to provide a new and improved glow cup apparatus which is susceptible of a low cost of manufacture with regard to both materials and labor, and which accordingly is then susceptible of low prices of sale to the consuming public, thereby making such glow cup apparatus economically available to the buying public.

Still yet another object of the present invention is to provide a new and improved glow cup apparatus which provides in the apparatuses and methods of the prior art some of the advantages thereof, while simultaneously overcoming some of the disadvantages normally associated therewith.

Still another object of the present invention is to providing an illuminated drinking vessel and further provide a drinking vessel that can be used to open a twist off cap.

Lastly, it is an object of the present invention to provide a new and improved glow cup apparatus including a container of a material which is deformable upon the application of pressure by a user's hand. The container is formed with an open top and a closed bottom and a side wall between the top and bottom. The side wall has a cylindrical wall extending from a location adjacent to the top downwardly to a location adjacent to the bottom and radially exterior of the side wall and with a circular member to form a seal at the bottom of the outer wall to totally close the space between the side wall and the outer wall. An insert of a plastic material is located within the space with an inner surface in proximity to the outer surface of the side wall. A recess is formed along one vertical extent and between the insert and a side wall. A fracturable ampule is vertically oriented within the recess and contains a first chemiluminescent fluid. A second chemiluminescent fluid is positionable within the space and is adapted to be illuminated upon the fracturing of the ampule and contact with the first chemiluminescent fluid.

These together with other objects of the invention, along with the various features of novelty which characterize the invention, are pointed out with particularity in the claims annexed to and forming a part of this disclosure. For a better understanding of the invention, its operating advantages and the specific objects attained by its uses, reference should be had to the accompanying drawings and descriptive matter in which there is illustrated preferred embodiments of the invention.

#### BRIEF DESCRIPTION OF THE DRAWINGS

The invention will be better understood and objects other than those set forth above will become apparent when consideration is given to the following detailed description thereof. Such description makes reference to the annexed drawings wherein:

FIG. 1 is a perspective view of the preferred embodiment of the glow cup apparatus constructed in accordance with the principles of the present invention.

FIG. 2 is a top plan view the present invention taken along lines 2—2 of FIG. 1.

FIG. 3 is a bottom plan view of the present invention taken along lines 3—3 of FIG. 1 of the present invention.

FIG. 4 is a cross-sectional view of the present invention taken along lines 4—4 of FIG. 2.

FIG. 5 is a cross-sectional view of a first alternate embodiment of the present invention.

FIG. 6 is a cross-sectional of the first alternate embodiment taken along lines 6—6 of FIG. 5.

FIG. 7 is a cross-sectional view of a second alternate embodiment of the present invention.

FIG. 8 is a cross-sectional of the second alternate embodiment taken along lines 8—8 of FIG. 7.

FIG. 9 is a perspective view of a third alternate embodiment of the present invention.

FIG. 10 is a top plan view of the invention of FIG. 9.

FIG. 11 is a cross-sectional view taken along lines 11—11 of FIG. 10.

FIG. 12 is a bottom view of the embodiment of FIG. 9.

FIG. 13 is a perspective view of an enlarged version of the third alternate embodiment of the present invention.

FIG. 14 is a top view of the embodiment of FIG. 13.

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FIG. 15 is a perspective view of an alternate embodiment of the invention.

FIG. 16 is a top view taken along line 16—16 of FIG. 15.

FIG. 17 is a cross sectional view taken along line 17—17 of FIG. 16.

FIG. 18 is a cross sectional view taken along 18—18 of FIG. 15.

FIG. 19 is a cross sectional view of yet another alternate embodiment of the invention.

FIG. 20 is a cross sectional view taken along line 20—20 of FIG. 19.

FIG. 21 is a cross sectional view similar to FIG. 17 but to an alternate embodiment.

FIG. 22 is a cross sectional view similar to FIG. 18 but to the FIG. 21 embodiment.

Similar reference characters refer to similar parts throughout the several views of the drawings.

#### DESCRIPTION OF THE PREFERRED EMBODIMENT

With reference now to the drawings, and in particular to FIG. 1 thereof, a new and improved glow cup apparatus embodying the principles and concepts of the present invention and generally designated by the reference numerals 10, 80, 110 and 150 will be described.

The present invention, the new and improved glow cup apparatus, is comprised of a plurality of components. Such components in their broadest context include a first generally cylindrically shaped container, a second generally cylindrically container, a first chemiluminescent fluid, a second chemiluminescent fluid and at one least ampule. Such components are individually configured and correlated with respect to each other so as to attain the desired objective.

More specifically, the present invention includes a first generally cylindrically shaped container 12 being mildly compressible, as seen in FIG. 1. The first generally cylindrically shaped container has a first outer wall 14 communicating with a first outer bottom 16. The first generally cylindrically shaped container has a first inner wall communicating with a first inner bottom 22. The first inner and outer walls are illustrated in FIG. 4. The first outer wall and the first inner wall define a first upper edge 26 and a first continuous wall space 28. The first inner bottom and the first outer bottom define a floor space. The first outer wall is extended a distance from the first outer bottom.

Also, the first outer bottom has a cylindrical recess 32, as depicted in FIG. 3, and shown to project inwardly of the first outer bottom. The cylindrical recess has a ribbed inner wall 34. The ribbed inner wall is sized and shaped to receive a twist off bottle cap. The type of twist off cap found on beer bottles and soft drink bottles.

A second generally cylindrically shaped container 38 is provided. The second generally cylindrically shaped container has a second outer wall 42 communicating with a second outer bottom 44. It also has a second inner 46 wall communicating with a second inner bottom 48. As seen in FIG. 2, the second outer wall has a pair of concave recesses 52. The pair of concave recesses are symmetrically positioned one from the other about the second outer wall. The second generally cylindrically shaped container is sized to be positioned within the first generally cylindrically shaped container and defines a spacing 54 between the first and second container. Access to the spacing may only be obtained through the cylindrical recess at the first outer bottom, as shown in FIG. 4. FIGS. 3 and 4 depict a

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removable plug 56. The plug seals the second chemiluminescent fluid within the spacing 54.

Included are a pair of ampules 60. Each of the ampules have a thin membrane 62. The pair of ampules form a first ampule and a second ampule. Each of the pair of ampules contains a first chemiluminescent fluid 64.

The first chemiluminescent fluid is an oxalant. The oxalate components used in the present invention are standard in the chemiluminescent industry. Such as the oxalate ester present as a solution in the selected propylene glycol dihydrocarbyl ether solvent. The oxalant esters employed in the present invention are well known in the prior art of U.S. Pat. Nos. 5,171,081, 5,218,367, 5,597,517, 5,705,103 and 5,597,517. The oxalant may include the solvent and the fluorescent or just the solvent. Any one of the prior arts listed are capable of providing the desired oxalant for the present invention.

One of each of the pair of ampules is positioned within one of each of the pair of concave recesses 52 of the second generally cylindrically shaped container 38. Each of the pair of ampules is retained within concave recesses when the second generally cylindrically shaped container is positioned within the first generally cylindrically shaped container.

Additionally, a second chemiluminescent fluid 66 is sealed within the spacing between the first generally cylindrically shaped container and the second generally cylindrically shaped container. The second chemiluminescent fluid is the activator. The activator capable of providing the desired chemiluminescent for the invention when combined with the oxalant in the present invention is well known in the prior art of U.S. Pat. Nos. 5,171,081, 5,218,367, 5,597,517, 5,705,103 and 5,597,517. The activator may include the fluorescent or the catalyst. Any one of the prior arts listed are capable of providing the desired activator for the present invention.

The second chemiluminescent fluid is placed within the spacing after the first and second generally cylindrically shaped containers are spin welded together. This coupling is done after the ampules are in position. The second chemiluminescent fluid is placed in the spacing by way of the cylindrical recess. Once the second chemiluminescent fluid is in the spacing, the plug 56 is put in position and permanently seals the second fluid in the spacing.

An upper rim 68 is formed about the second generally cylindrically shaped container. The upper rim has a first horizontal portion 72 extending outwardly therefrom and a second horizontal portion 74 spaced therefrom and extending from the upper rim. FIG. 4 shows the first horizontal portion engaging the upper edge of the first outer wall of the first generally cylindrically container. The first horizontal portion encloses the spacing of the first generally cylindrically shaped container and the second generally cylindrically shaped container.

Finally, the first generally cylindrically shaped container has a force applied to the a first outer wall to compress the first inner wall. The force presses the first inner wall against the pair of ampules to rupture the thin membrane. The thin membrane of the pair of ampules, when ruptured, allows the first chemiluminescent fluid to flow into the spacing and mix with the second chemiluminescent fluid to produce a chemiluminescent reaction.

Furthermore, the present invention may come with three alternative container forms. The first alternate embodiment 80 is shown in FIG. 5. The first alternate embodiment has a first generally cylindrically shaped container 12 with a

structure like FIG. 4. The difference between the embodiments of FIG. 4 and FIG. 5 are found in the second generally cylindrically shaped container of each. The second generally cylindrically shaped container 82 of the first alternate embodiment has a second outer wall 84 communicating with a second outer bottom 86. Also, it includes a second inner wall 88 communicating with a second inner bottom 92. The second generally cylindrically shaped container 12 is sized for positioning within the first generally cylindrically shaped container and defining a spacing 94.

Included are a pair of ampules 60 which are identical in form to the ampules of FIG. 4. The ampules of first alternate embodiment of FIG. 5 may be more elongated. Each is positioned within the spacing and has a first chemiluminescent fluid.

Additionally, a felt like material 102 is impregnated with a second chemiluminescent fluid. As shown in FIGS. 5 and 6, the felt like material is attached to the inner wall of the first generally cylindrically shaped container.

A peripheral rim 104 is formed about the second generally cylindrically shaped container. The peripheral rim is formed by a first horizontal rim 106 extending outwardly therefrom and a second horizontal rim 108 extending above the first horizontal rim. The second horizontal rim engages an upper edge 26 of the first outer wall of the first generally cylindrically shaped container for enclosing the spacing of the first generally cylindrically shaped container and the second generally cylindrically shaped container.

Lastly, in the first alternate embodiment, the first generally cylindrically shaped container has a force applied to the first outer wall for compressing the first inner wall against the pair of ampules to rupture the thin membrane. The thin membrane of the pair of ampules, when ruptured, allows the first chemiluminescent fluid to be absorbed into the felt to produce a chemiluminescent reaction.

The second alternate embodiment 110 has properties similar to the embodiments discussed above. This embodiment has a generally cylindrically shaped container 112. The generally cylindrically shaped container has a first outer wall 114 communicating with an outer bottom 116 and a first inner wall 118 communicating with a first inner bottom 122. The first outer wall is extended a distance from the first outer bottom. The first outer wall has a generally concave recess 126, as seen in FIG. 8. The outer bottom has a cylindrical recess 128 with a ribbed inner wall 132 that is sized and shaped to receive a twist off bottle cap.

Included is a convex cover 136. The convex cover is mildly compressible. The convex cover has a second outer wall 138 and a second inner wall 142 communicating with the first inner bottom 122. The convex cover is sized for positioning over the concave recess of the generally cylindrically shaped container to define a spacing 144 therebetween.

At least one ampule 60 is positioned within the concave recess of the generally cylindrically shaped container. The ampule has a first chemiluminescent fluid 64. The first chemiluminescent fluid is the same for each ampule. As best illustrated in FIG. 7, a second chemiluminescent fluid 66 is sealed within the spacing between the generally cylindrically shaped container and the cover.

Lastly, the convex cover has a force applied to the first outer wall for compressing the first inner wall against the ampule to rupture the thin membrane. The thin membrane of the ampule being ruptured allows the first chemiluminescent fluid to flow into the spacing and mix with the second chemiluminescent fluid to produce a chemiluminescent reaction.

The third alternate embodiment 150 comes in a cup form 152 and a glass form 154. It should be understood that the properties of the glass are identical to the cup. The properties of the third alternate embodiment are similar to the embodiments discussed above. This embodiment has a generally cylindrically shaped container 156 as shown in FIG. 11. The generally cylindrically shaped container has a first outer wall 160 communicating with a base portion 162, as seen in FIG. 9. Also, the container has a first inner wall 164 communicating with a first inner bottom 166, as shown in FIG. 10. The inner wall has a semi-concave section 168 for defining an interior spaced 172 adjacent the first outer wall. The interior space exiting into the base portion for the creation of an entry way 174.

As shown in FIGS. 9 an ampule 60 is positioned within the interior space 172. The ampule having a first chemiluminescent fluid 64. The first chemiluminescent fluid is the same for each ampule.

As best illustrated in FIG. 11, a second chemiluminescent fluid 66 positioned within the interior space 172. The second chemiluminescent fluid is the same for each embodiment of the present invention and is set forth above.

Finally, a bottom cover plate 176 is provided. As shown in FIGS. 11 and 12 the bottom cover plate has a tongue 178 and groove 180 periphery for engaging a bottom opening of the base portion. The bottom cover sealing the ampule and the second chemiluminescent fluid within the interior space of the generally cylindrically shaped container. FIG. 13 and FIG. 14 are larger versions of the cup of FIG. 9.

A simplified embodiment is shown in FIGS. 15 through 18. In such embodiment, a glow cup system 200 has illumination capabilities over at least a portion of the cup periphery during operation and use. First provided is a container 202. The container is formed of a translucent plastic material with limited flexibility to render it deformable upon the application of pressure by a user's hand similar to the prior embodiments. The container is formed in a generally cylindrical configuration. The container has an upper generally cylindrical section 204 of an enlarged diameter and a lower generally cylindrical section 206 of a reduced diameter. The container also has an intermediate section 208 between the upper section and lower section. The intermediate section is formed in a generally cylindrical configuration with an intermediate diameter. At least the lower and intermediate sections are formed to have a frustoconical taper wider at the top than at the bottom to facilitate removal from a mold during fabrication.

The container is formed with a generally disc shaped generally horizontal upper shoulder 210 between the upper and intermediate sections. A disc shaped generally horizontal lower shoulder 212 is provided between the intermediate and lower sections. The intermediate section also has a cylindrical outer wall 214 extending downwardly from the upper shoulder radially exterior of the intermediate section to form an enclosable generally cylindrical space 216. The portion of the container between the space and the interior of the container is continuous and without a seam to preclude the flow of fluid from the space to the container for user safety for complying with government safety regulations.

Next provided in this embodiment is a lower inverted cup 220. The cup has an exterior generally cylindrical face 222 surrounding the lower section of the container. The cup has an exterior diameter generally equal to the exterior diameter of the outer wall. The cup also has a generally disc shaped horizontal plate 224 contacting the lower edge of the outer

wall and the lower shoulder. The horizontal plate is sealed with respect to the lower edge of the outer wall and the lower shoulder to effect the sealing of the space.

Next provided is a generally rigid cylindrical insert 228. The insert is formed of a white plastic material. Vertical ribs 230 extend outwardly from the insert. The inner surface 232 is preferably in contact with the outer surface 234 of the intermediate section.

An inverted stopper 238 is secured within the lower extent of the lower section and forms a bottom for the container to allow the receipt and support of a fluid within the container. The lower central extent of the stopper has inwardly facing teeth 240 which function as energy directors. Such teeth are sized to fit over a bottle cap whereby the lower portion of the glow cup system may function as a bottle opener.

A vertically disposed semi-cylindrical recess 242 is formed within the insert and intermediate and lower sections along one vertical region. The recess is sealed above and below by inwardly facing projections 246, 248 on the upper shoulder and the plate.

A fracturable ampule 252 is next provided. The ampule is vertically oriented within the recess. A first chemiluminescent fluid 254 is provided within the ampule. The fluid is thereby dispensed into the space upon the fracture of the ampule when the outer wall is squeezed by a user.

Finally, a second chemiluminescent fluid 256 is positioned within the space. The second fluid is adapted to be illuminated upon the fracturing of the ampule and contact with the first chemiluminescent fluid.

The final embodiment is shown in FIGS. 19 and 20. Such embodiment is similar to that of FIGS. 15 through 18 but, preferably, of a smaller size. The glow cup 260 of this embodiment has a container 262. Such container is formed in a generally cylindrical configuration. The container has an upper, generally cylindrical section 264 of an enlarged diameter and a lower generally cylindrical section 266 of a reduced diameter. Also included is a generally cylindrical outer wall 268 formed as a cylindrical extension of the upper section. A generally cylindrical space is thereby formed between the lower section and the outer wall.

Unlike the prior embodiment, this embodiment has a bottom 272 of the lower section molded integrally with the lower ends of the lower side wall to totally seal the entire drink receiving container except at the open upper top. In addition, the lowermost end of the outer wall extends lower than the lowermost extent of the lower section. Further, an outwardly then downwardly extending flange 274 is integrally formed with the outer wall. This is to receive a sealing disc 276 adapted to be received within the flange to thereby totally seal the space between the lower section and the outer wall.

As in the prior embodiment, there is next provided a generally rigid cylindrical insert 280. The insert is formed of a colored plastic material, preferably white. Vertical ribs 282 extend outwardly from the insert. The inner surface 284 is preferably in proximity to the outer surface 286 of the lower section 288. The sealing disk and the insert are preferably molded together as a one-piece unit for ease of fabrication and assembly. Also molded together therewith is a C-shaped clip 290 for supporting the ampule. This, once again, is for ease of assembly.

A vertically disposed semi-cylindrical recess 292 is formed within the insert and lower section along one vertical region.

A fracturable ampule 294 is next provided. The ampule is vertically oriented within the recess. A first chemilumines-

cent fluid 296 is provided within the ampule. The fluid is thereby dispensed into the space upon the fracture of the ampule when the outer wall is squeezed by a user. A second chemiluminescent fluid 298 is positioned within the space. The second fluid is adapted to be illuminated upon the fracturing of the ampule in contact with the first chemiluminescent fluid.

The preferred material for the cup is a plastic such as polypropylene, clarified polypropylene, polyethylene or polyethylene terephthalate (PET). The preferred material for the insert is the same as that for the cup, but preferably colored, such as white.

As to the manner of usage and operation of the present invention, the same should be apparent from the above description. Accordingly, no further discussion relating to the manner of usage and operation will be provided.

With respect to the above description then, it is to be realized that the optimum dimensional relationships for the parts of the invention, to include variations in size, materials, shape, form, function and manner of operation, assembly and use, are deemed readily apparent and obvious to one skilled in the art, and all equivalent relationships to those illustrated in the drawings and described in the specification are intended to be encompassed by the present invention.

Therefore, the foregoing is considered as illustrative only of the principles of the invention. Further, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact construction and operation shown and described, and accordingly, all suitable modifications and equivalents may be resorted to, falling within the scope of the invention.

What is claimed as being new and desired to be protected by Letters Patent of the United States is as follows:

1. A new and improved glow cup apparatus comprising, in combination:

a first generally cylindrically shaped container being mildly compressible, the first generally cylindrically shaped container having a first outer wall communicating with a first outer bottom and a first inner wall communicating with a first inner bottom, the first outer wall and the first inner wall defining a first upper edge and a first continuous wall space, the first inner bottom and the first inner wall defining a floor space therebetween, the first outer wall being extended a distance from the first outer bottom;

the first outer bottom having a cylindrical recess projecting inwardly thereof, the cylindrical recess having an ribbed inner wall, the ribbed inner wall being sized and shaped to receive a twist off bottle cap;

a second generally cylindrically shaped container having a second outer wall communicating with a second outer bottom and a second inner wall communicating with a second inner bottom, the second outer wall having a pair of concave recesses symmetrically positioned thereabout, the second generally cylindrically shaped container being sized for positioning within the first generally cylindrically shaped container and defining a spacing therebetween;

a pair of ampules each having a thin membrane, the pair of ampules forming a first ampule and a second ampule, each of the pair ampules having a first chemiluminescent fluid therein, one of each of the pair of ampules being positioned within one of each of the pair of concave recesses of the second generally cylindrically shaped container, each of the pair of ampules being retained within concave recesses when the second

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generally cylindrically shaped container being positioned within the first generally cylindrically shaped container;

a second chemiluminescent fluid being sealed within the spacing between the first generally cylindrically shaped container and the second generally cylindrically shaped container;

an upper rim about the second generally cylindrically shaped container, the upper rim having a first horizontal portion extending outwardly therefrom and a second horizontal portion spaced therefrom and extending from the upper rim, the first horizontal portion engaging the upper edge of the first outer wall of the first generally cylindrically shaped container for enclosing the spacing of the first generally cylindrically shaped container and the second generally cylindrically shaped container; and

the first generally cylindrically shaped container having a force applied to the a first outer wall for compressing the first inner wall against the pair of ampules to rupture the thin membrane, the thin membrane of the pair of ampules being ruptured allows the first chemiluminescent fluid to flow into the spacing and mix with the second chemiluminescent fluid to produce a chemiluminescent reaction.

2. A glow cup apparatus comprising:

a first generally cylindrically shaped container, the first generally cylindrically shaped container having a first outer wall communicating with a first outer bottom and a first inner wall communicating with a first inner bottom, the first outer wall being extended a distance from the first outer bottom and forming a cylindrical recess, the cylindrical recess projecting inwardly thereof, the cylindrical recess having a ribbed inner wall being sized and shaped to receive a twist off bottle cap;

a second generally cylindrically shaped container having a second outer wall communicating with a second outer bottom and a second inner wall communicating with a second inner bottom, the second generally cylindrically shaped container being sized for positioning within the first generally cylindrically shaped container and defining a spacing therebetween;

a pair of ampules each having a thin membrane with one each positioned within the spacing, each of the pair ampules having a first chemiluminescent fluid therein;

a felt like material impregnated with a second chemiluminescent fluid being attached to the inner wall of the first generally cylindrically shaped container; and

a peripheral rim about the second generally cylindrically shaped container the peripheral rim being formed by a first horizontal rim extending outwardly therefrom and a second horizontal rim extending from the first horizontal rim, the second horizontal rim engaging an upper edge of the first outer wall of the first generally cylindrically shaped container for enclosing the spacing of the first generally cylindrically shaped container and the second generally cylindrically shaped container.

3. The glow cup apparatus as set forth in claim 2, wherein the first generally cylindrically shaped container being mildly compressible.

4. The glow cup apparatus as set forth in claim 2, wherein the first outer wall and the first inner wall defining the first upper edge and a first continuous wall space, and the first inner bottom and the first inner bottom defining a floor space therebetween.

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5. The glow cup apparatus as set forth in claim 2, wherein the pair of ampules forming a first ampule, a second ampule and the pair of ampules being retained within spacing when the second generally cylindrically shaped container being positioned within the first generally cylindrically shaped container.

6. The glow cup apparatus as set forth in claim 2, wherein the first generally cylindrically shaped container having a force applied to the first outer wall for compressing the first inner wall against the pair of ampules to rupture the thin membrane, and the thin membrane of the pair of ampules being ruptured allows the first chemiluminescent fluid to be absorbed into the felt to produce a chemiluminescent reaction.

7. A glow cup apparatus comprising:

a generally cylindrically shaped container having a first outer wall communicating with an outer bottom and a first inner wall communicating with a first inner bottom, the first outer wall being extended a distance from the first outer bottom, the first outer wall having a generally concave recess therein;

a convex cover being mildly compressible and having a second outer wall and a second inner wall communicating with the first inner bottom, the convex cover being sized for positioning over the concave recess of the generally cylindrically shaped container and defining a spacing therebetween;

an ampules being positioned within the concave recess of the generally cylindrically shaped container, the ampule having a first chemiluminescent fluid therein,

a second chemiluminescent fluid being sealed within the spacing between the generally cylindrically shaped container and the cover; and

the convex cover having a force applied to the a first outer wall for compressing the first inner wall against the ampule to rupture the thin membrane, the thin membrane of the ampule being ruptured allows the first chemiluminescent fluid to flow into the spacing and mix with the second chemiluminescent fluid to produce a chemiluminescent reaction.

8. The glow cup apparatus as set forth in claim 7, wherein the first outer wall and the first inner wall defining a first continuous wall space, and the first inner bottom and the first inner bottom defining a floor space therebetween.

9. The glow cup apparatus as set forth in claim 7, wherein the first outer bottom having a cylindrical recess projecting inwardly thereof, and the cylindrical recess having a ribbed inner wall being sized and shaped to receive a twist off bottle cap.

10. The glow cup apparatus as set forth in claim 7, wherein the ampule having a thin membrane, and the ampule being retained within concave recesses when the cover being positioned over the concave recess of the generally cylindrically shaped container.

11. A glow cup apparatus comprising:

a generally cylindrically shaped container having a first outer wall communicating with a base portion and a first inner wall communicating with a first inner bottom, the inner wall having a semi-concave section for defining an interior spaced adjacent the first outer wall, the interior space exiting into the base portion for the creation of an entry way;

an ampule being positioned within the interior space, the ampule having a first chemiluminescent fluid therein;

a second chemiluminescent fluid positioned within the interior space;

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a bottom cover plate having a tongue and groove periphery for engaging a bottom opening of the base portion, the bottom cover sealing the ampule and the second chemiluminescent fluid within the interior space of the generally cylindrically shaped container.

12. A new and improved glow cup system with illumination capabilities over the cup periphery during operation and use comprising, in combination:

- a container of a translucent plastic material with limited flexibility to render it deformable upon the application of pressure by a user's hand, the container being formed in a generally cylindrical configuration with an upper generally cylindrical section of an enlarged diameter and a lower generally cylindrical section of a reduced diameter and an intermediate section therebetween in a generally cylindrical configuration with an intermediate diameter, the container being formed with a generally disc shaped generally horizontal upper shoulder between the upper and intermediate sections and a disc shaped generally horizontal lower shoulder between the intermediate and lower sections, the intermediate section also having a cylindrical outer wall extending downwardly from the upper shoulder radially exterior of the intermediate section to form an enclosable generally cylindrical space therebetween, the portion of the container between the space and the interior of the container being continuous and without a seam to thereby preclude the flow of fluid therebetween;
- a lower inverted cup with an exterior generally cylindrical face surrounding the lower section of the container and having an exterior diameter generally equal to the exterior diameter of the outer wall and having a generally disc shaped horizontal plate contacting the lower edge of the outer wall and the lower shoulder and sealed with respect thereto to effect the sealing of the space;
- a generally rigid cylindrical insert of a white plastic material with vertical ribs extending outwardly therefrom with an inner surface in contact with the outer surface of the intermediate section;
- an inverted stopper secured within the lower extent of the lower section for forming a bottom for the container to allow the receipt and support of a fluid within the container;
- a vertically disposed semi-cylindrical recess formed within the insert and intermediate and lower sections along one vertical region thereof, the recess being

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sealed above and below by inwardly facing projections on the upper shoulder and the plate;

a fracturable ampule vertically oriented within the recess with a first chemiluminescent fluid therein for being dispensed into the space upon the fracture of the ampule by the squeezing of the outer wall by a user; and

a second chemiluminescent fluid positioned within the space and adapted to be illuminated upon the fracturing of the ampule and contact with the first chemiluminescent fluid.

13. A glow cup with illumination capabilities comprising:

a container of a material which is deformable upon the application of pressure by a user's hand, the container being formed with an open top and a closed bottom and a side wall therebetween, the side wall also having a cylindrical outer wall extending from a location adjacent to the top downwardly to a location adjacent to the bottom and radially exterior of the side wall and with a circular member to form a seal at the bottom of the outer wall to thereby totally close the space between the side wall and the outer wall;

an insert of a plastic material located within the space with an inner surface in proximity to the outer surface of the side wall;

a recess formed between the insert and side wall along one vertical extent thereof;

a fracturable ampule vertically oriented within the recess with a first chemiluminescent fluid therein; and

a second chemiluminescent fluid positionable within the space and adapted to be illuminated upon the fracturing of the ampule and contact with the first chemiluminescent fluid.

14. The glow cup as set forth in claim 13 wherein the container includes an upper section of an enlarged diameter, a lower section of a reduced diameter and an intermediate section of an intermediate diameter with the outer wall being laterally spaced from the intermediate section.

15. The glow cup as set forth in claim 13 wherein the container includes an upper section of an enlarged diameter and a lower section of a reduced diameter and the outer wall is laterally spaced from the lower section.

16. The glow cup as set forth in claim 13 and further including a recess in the bottom of the cup with inwardly extending teeth for functioning as a bottle cap opener.

\* \* \* \* \*



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(45) Date of Patent: **Jul. 3, 2001**

(54) **DECORATIVE CONTAINER AND METHOD FOR DECORATING A CONTAINER**

(76) Inventor: **Lori Greiner, 1301 Dearborn Pkwy., Suite 402, Chicago, IL (US) 60610**

(\*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

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(52) U.S. Cl. .... **206/457; D7/541; 206/514; 220/23.87; 220/528; 220/575**

(58) Field of Search ..... **40/312, 1, 324, 40/722; 81/8.5; 206/6.1, 457, 514, 216; 220/4.21, 23.87, 23.89, 23.91, 506, 527, 528, 574.2, 574.3, 575, 592.17, 592.23, 592.28, 671; D7/505, 507, 541**

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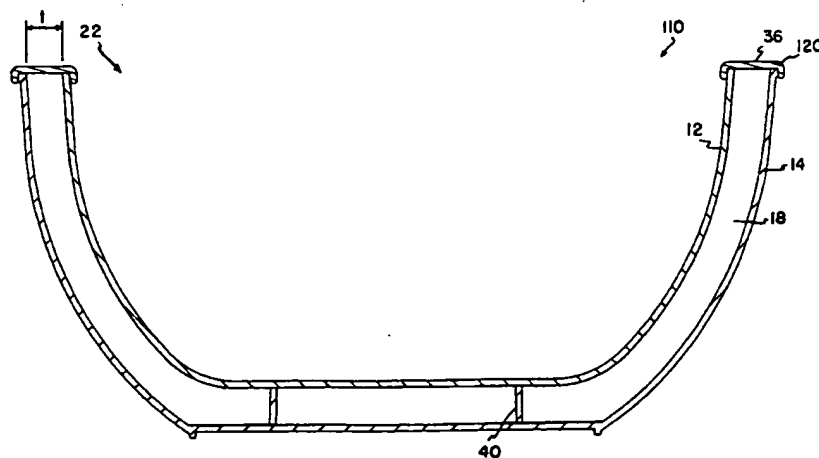
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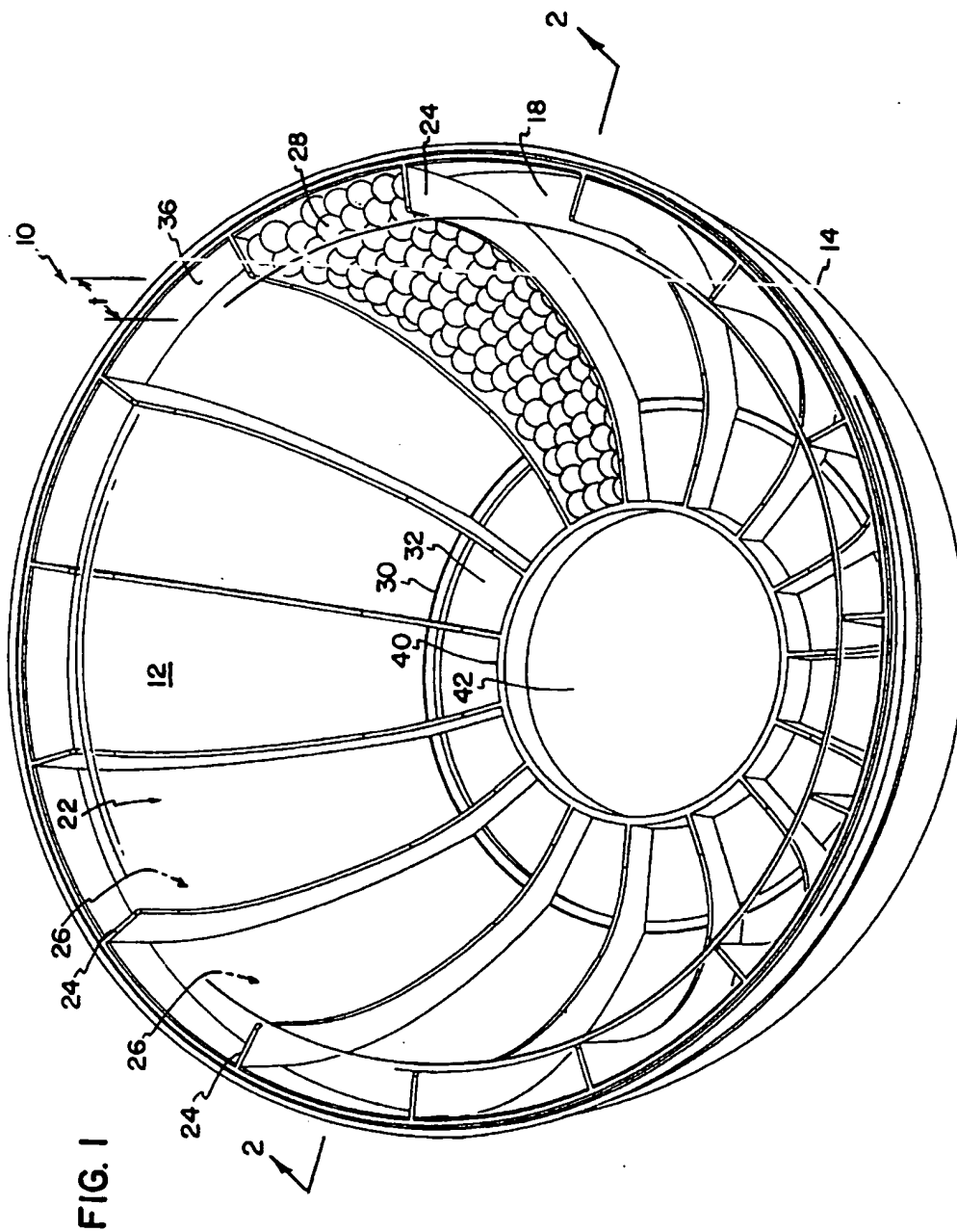
(57) **ABSTRACT**

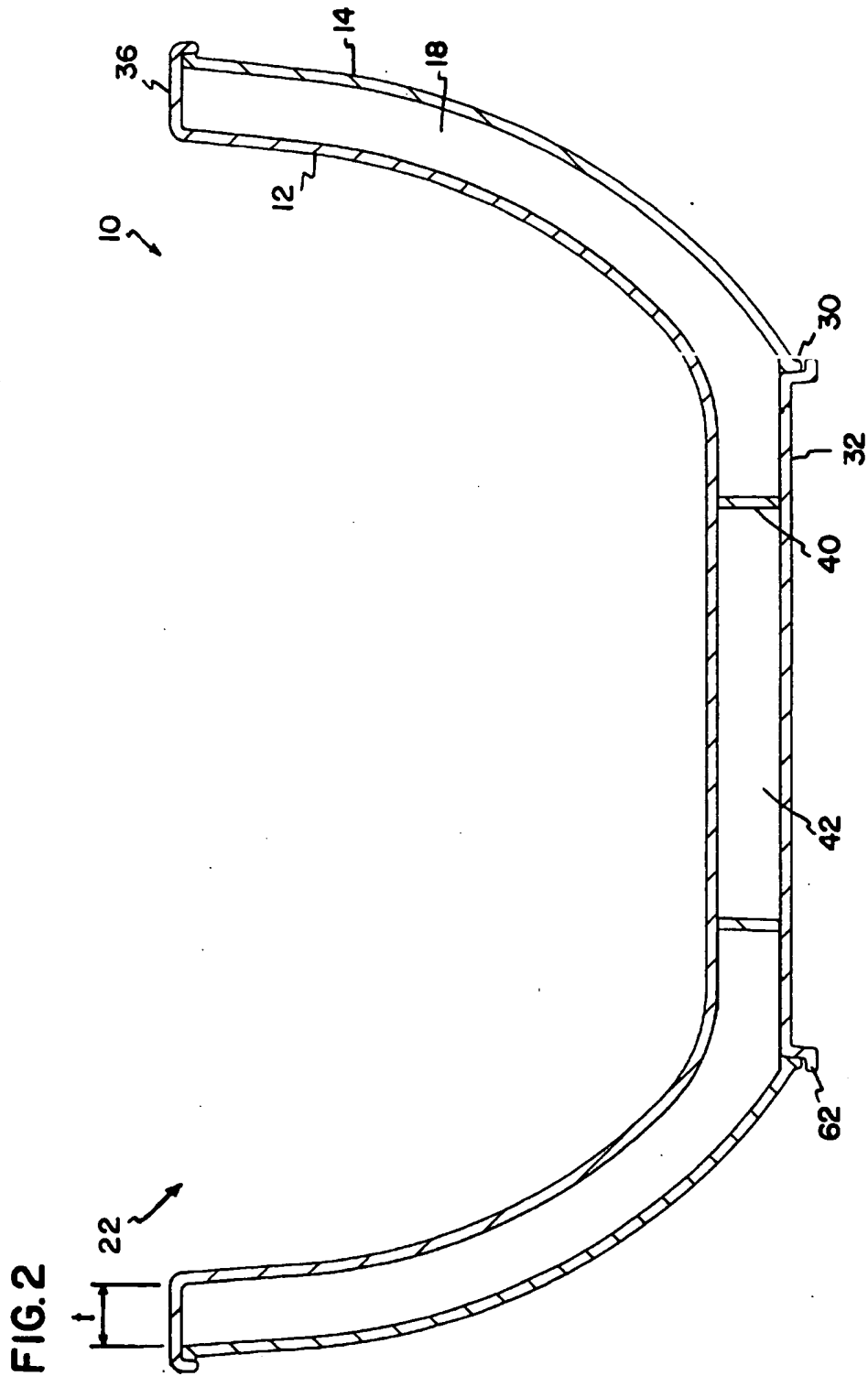
A decorative container for displaying items in internal cavities includes an inner container and an outer container, defining a hollow region therebetween. The decorative container further includes a plurality of dividers within the hollow region separating the region into a plurality of internal cavities. The outer container further includes a removable plate, configured to provide access to each of the internal cavities, so that decorative objects within the internal cavities can be easily changed or rearranged. A method for decorating a container includes placing objects within the hollow region through an access opening and closing the access opening with a removable plate.

**20 Claims, 7 Drawing Sheets**



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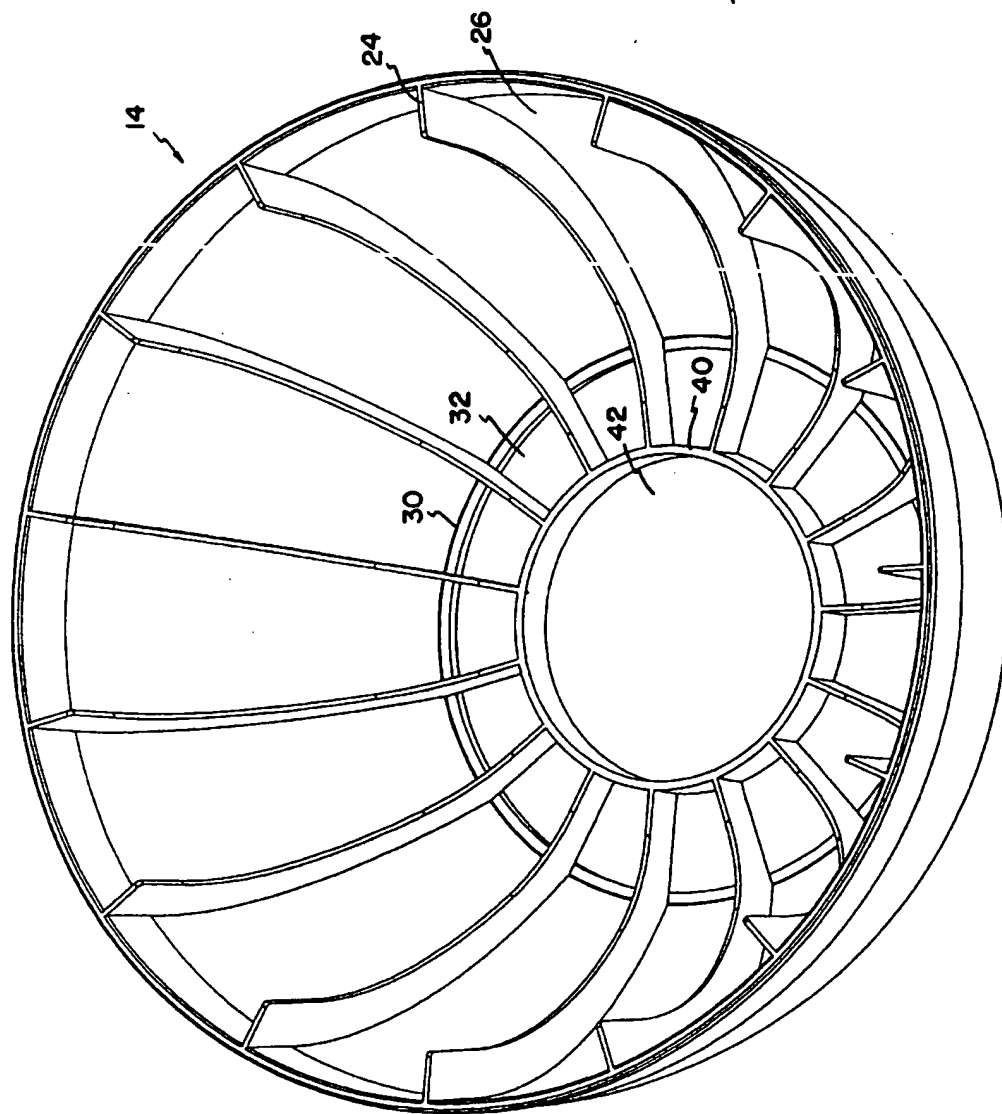


FIG. 3

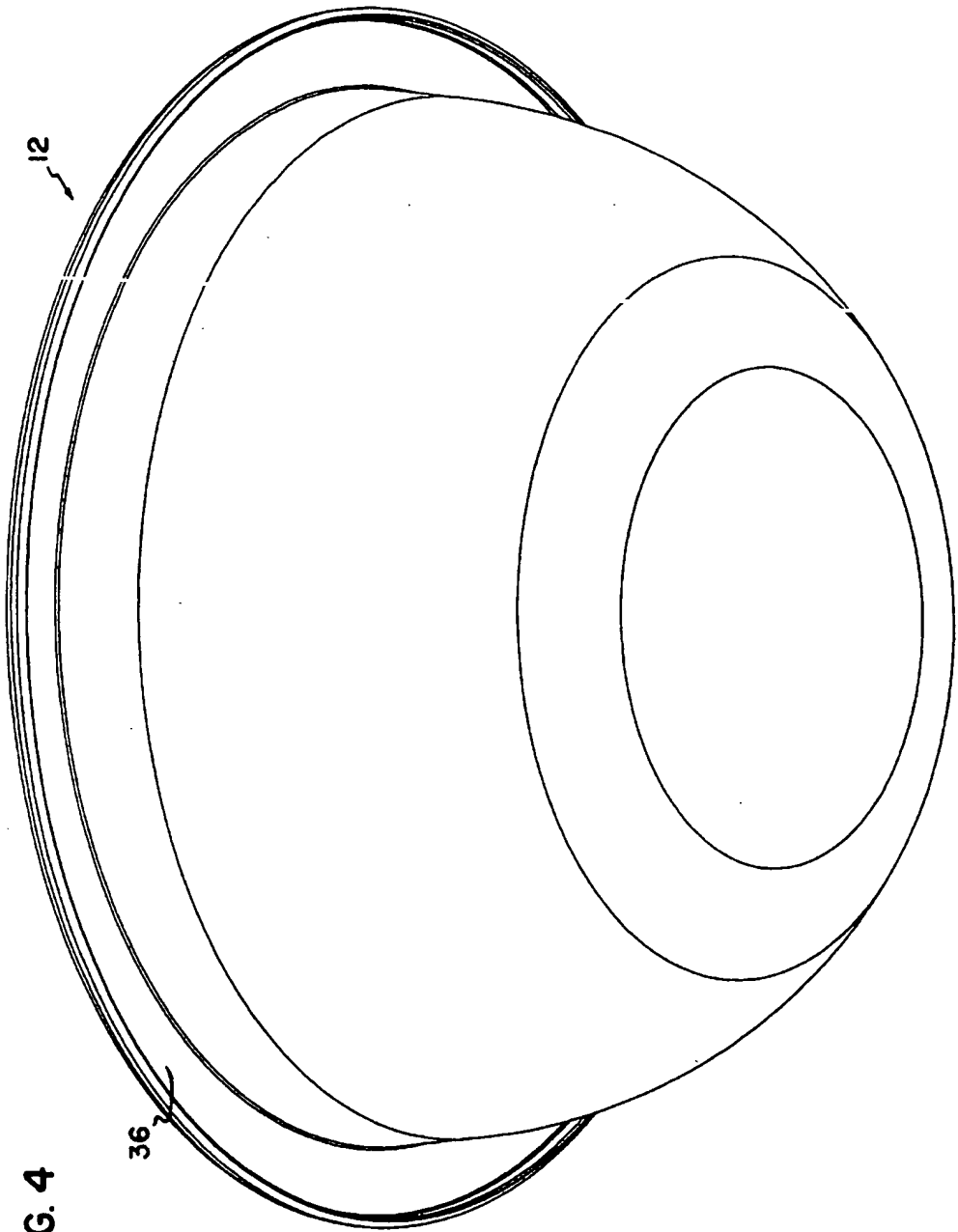


FIG. 4

FIG. 5

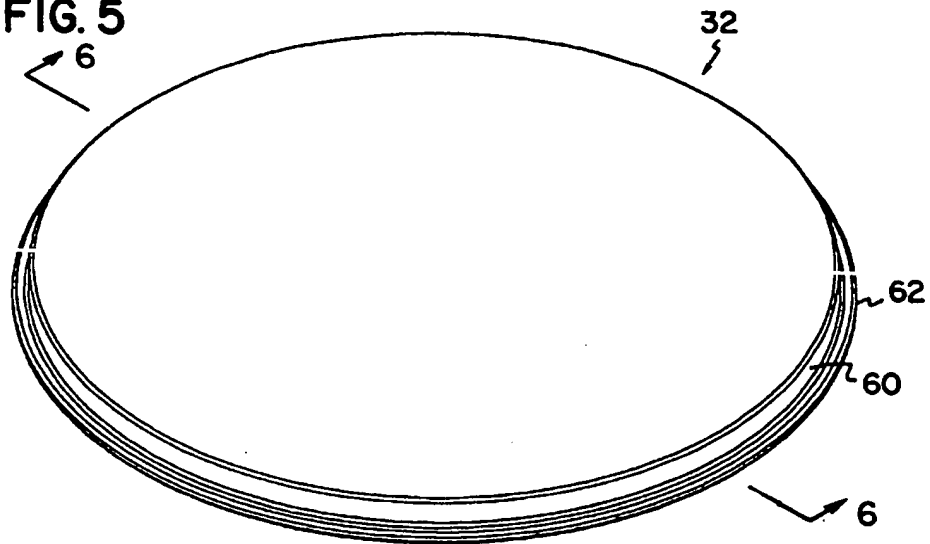
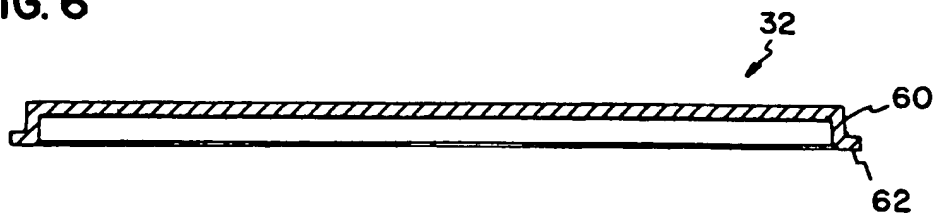
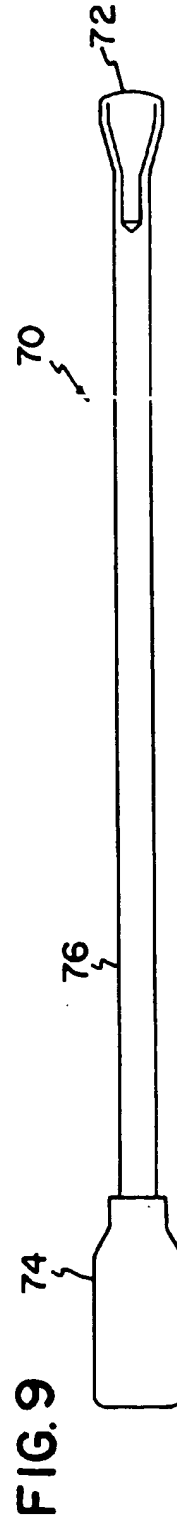
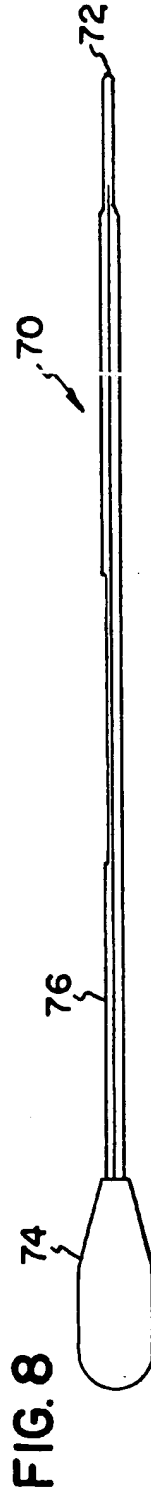
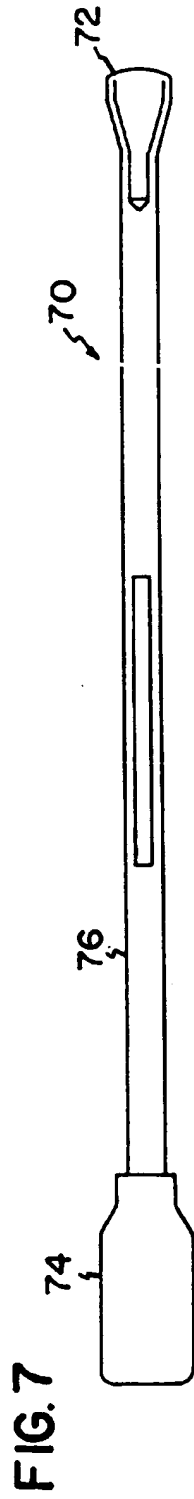
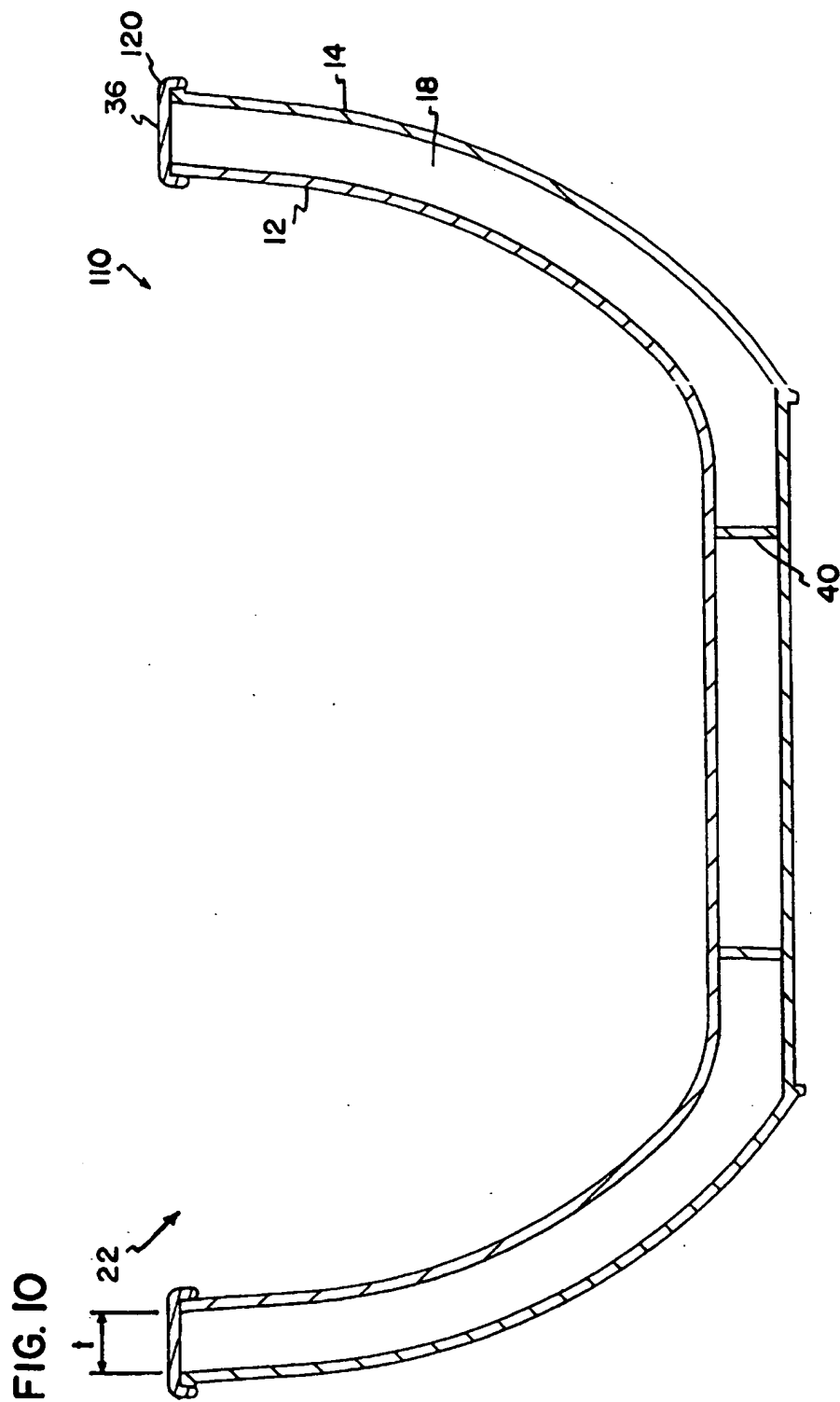


FIG. 6







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## DECORATIVE CONTAINER AND METHOD FOR DECORATING A CONTAINER

### FIELD OF THE INVENTION

The present invention is directed to an arrangement for a decorative container, more particularly to a decorative container including a hollow region where objects can be displayed, and to a method for decorating a container.

### BACKGROUND OF THE INVENTION

Decorative containers are known in the prior art that allow sheets of material or objects to be stored within the walls of the container. For example, beverage mugs are known in the art that provide space for a sheet of material, such as decorative paper or a photo, in the wall of the mug. These types of mugs sometimes provide a removable portion so that the sheet of material may be changed by the user. Most of these types of beverage mugs in the prior art accommodate a thin sheet of material, like a photo, although some of these decorative mugs may allow for insertion of liquid or fine particles within the space provided for decoration or information display.

However, there is a need for arrangements especially situated to hold three-dimensional decorative objects within the walls of the container that can be easily changed. There is also a need for an arrangement where a number of internal cavities are provided for separating the decorative objects, to provide attractive separation and placement of decorative objects.

### SUMMARY OF THE INVENTION

Generally, the present invention provides a decorative container that displays items in internal cavities, the container comprising an inner container nested within an outer container thereby defining a hollow region therebetween. The decorative container further includes a plurality of dividers within the hollow region that separate the region into a plurality of internal cavities. The decorative container also includes a removable plate that provides access to each of the internal cavities. Preferably, the inner and/or outer containers are bowl shaped and are transparent to provide viewing of the decorative objects within the internal cavities from all sides of the container. The plate that provides access to the internal cavities may be round and may fit into an opening in the outer container with a press fit configuration. Preferably, the plate fits into a bottom portion of the outer container and is removable without special tools. Alternatively, a removable member may be defined in an upper rim of the container for providing access to the hollow region.

In a preferred configuration, the hollow region has a thickness of at least about a quarter-inch apart, more preferably at least a half-inch apart, allowing room for positioning of decorative objects within the internal cavities. In one preferred configuration, the decorative container includes 15 vertical dividers that separate the region into 15 internal cavities. The decorative container may also include a circular divider at a bottom portion of the hollow region, defining a circular display area. The circular display area is preferably also accessed through the bottom plate in the outer container.

A system of the present invention may also include a wand configured to assist with positioning items in the hollow cavities. The wand preferably has a rigid tip and a soft tip at opposing ends. Also the wand preferably has a

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somewhat flexible shaft to allow insertion of the wand into the internal cavities, which may be curved when the decorative container is bowl-shaped.

The present invention also includes a decorative bowl for displaying items in an internal hollow region including an inner bowl nested within an outer bowl defining the hollow region therebetween where the hollow region has a thickness of at least about one-quarter inch apart. The decorative bowl further includes a removable bottom plate in the outer bowl that provides access to the hollow region. Alternatively, a removable member may be defined in the upper rim of the decorative bowl for providing access to the hollow region. The decorative bowl preferably further includes an upper rim covering the hollow region. The decorative bowl may include dividers within the hollow region defining internal cavities.

A method of the present invention for decorating a container, where the container includes a hollow region defined between an inner container and an outer container, includes the method steps of placing objects within the hollow region through an access opening in the outer container and closing the access opening with a removable plate. The method may also include the step of placing objects in a plurality of internal cavities within the hollow region, positioning or removing objects using a wand, and removing objects within the internal cavities before filling the internal cavities with new objects.

### BRIEF DESCRIPTION OF THE DRAWINGS

The invention may be more completely understood by considering the detailed description of various embodiments of the invention which follows in connection with the accompanying drawings.

FIG. 1 is an isometric view of one embodiment of the decorative container of the present invention.

FIG. 2 is a cross-sectional view of the decorative container shown in FIG. 1 taken along line 2—2.

FIG. 3 is an isometric view of an outer container that is a component of the decorative container of FIG. 1.

FIG. 4 is an isometric view of an inner container that is a component of the decorative container of FIG. 1.

FIG. 5 is an isometric view of a bottom plate that is a component of the decorative container of FIG. 1.

FIG. 6 is a cross-sectional view of the bottom plate of FIG. 5 taken along line 6—6.

FIGS. 7, 8 and 9 are a top view, side view and bottom view respectively of a wand that may be used with the present invention.

FIG. 10 is a cross-sectional view of a second embodiment of a decorative container of the present invention.

While the invention is amenable to various modifications and alternative forms, specifics thereof have been shown by way of example in the drawings and will be described in detail. It should be understood however that the intention is not to limit the invention to the particular embodiments described. On the contrary, the intention is to cover all modifications, equivalents, and alternatives falling within the spirit and scope of the invention as defined by the appended claims.

### DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

The present invention is believed to be applicable to a variety of systems and arrangements for displaying decora-

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tive objects in a container that can be used to hold items in the inner open area of the container and a method for decorating a container. The invention has been found to be particularly advantageous where it is desired to display different types of three-dimensional objects in a format such that the arrangement of the decorative objects and the content of the decoration can be easily changed to suit different circumstances. The invention is also especially useful where it is desirable to display several different types of decorative objects in separate internal cavities of a decorative bowl. While the present invention is not so limited, an appreciation of various aspects of the invention is best gained through a discussion of an example operating in such an environment.

FIG. 1 illustrates one particular embodiment of the decorative container of the present invention where the decorative container 10 is bowl shaped and where the container is transparent. The container 10 includes an inner container 12 and an outer container 14. The inner container 12 is nested within the outer container 14 and is spaced from the outer container 14 to define a hollow region 18 therebetween. The inner container 12 may also define an open area 22. In the preferred embodiment, the open area is sized to hold many different items such as salads, pasta, fruits, popcorn, snack food, candy, or potpourri, for example. A plurality of dividers 24 are positioned within the hollow region and separate the hollow region into several internal cavities 26. The internal cavities may store different types of decorative items 28, providing an appealing visual display by permitting separation of the different types of decorative items 28.

Now referring to FIG. 2, at the base or bottom portion of the outer container, an access opening 30 is defined. A removable plate 32 fits within the access opening 30 and is configured to provide access to each of the internal cavities 26. In a preferred embodiment, the removable plate is situated in the bottom of the outer container. The removable plate will be referred to throughout as a bottom plate, although other configurations are possible. The removable plate may alternatively be removable from portions of the container 10 other than the bottom. For example the plate could be an annular shaped plate removable from an upper rim of the container to provide access to the internal cavities. FIG. 10 is a cross-sectional view of a second embodiment of a decorative container 110 where the removable plate is an annular shaped plate 120 removable from an upper rim 36 of the container 110. Preferably, the removable plate may be pressed firmly into position in the access opening 30 by hand or using a heavy object to apply pressure. It is also preferable that the removable plate can be easily pried off the access opening 30 by hand.

The top of the decorative container 10 may include a rim or upper rim 36 that closes the internal cavities 26 from the outside environment. Therefore the internal cavities are not open to allow unwanted items to accidentally fall into the internal cavities during normal use. In a preferred embodiment, the upper rim 36 is an integral part of the inner bowl 12. Alternatively, the upper rim 36 may be a separate piece or may be integral with the outer bowl 14.

A circular divider 40 is shown at the bottom of the hollow region 18, defining a circular display area 42. The circular display area 42 is also shown in FIG. 1 and may be viewed from above the inner container at the bottom of the bowl.

FIG. 3 is an isometric view of the outer container 14 of the present invention. The outer container 14 includes dividers 24 separating the surface of the outer container into a plurality of sections. These sections will form the internal

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cavities 26 when the inner container 12 is attached. The outer container 14 has an access opening 30. The access opening 30 mates with the bottom plate 32 to close the hollow region 18.

FIG. 4 is an isometric view of an inner container 12 of the present invention. The inner container nests within the outer container 14 to define a hollow region 18 between the two containers. In one embodiment, the inner container 12 includes a rim 36 that provides the top closed surface of the decorative container 10. It is also possible that a rim is provided on the outer container 14, or a rim may be a separate piece of the container 10. Further, other arrangements are possible, including a container 10 without an upper rim or a removable upper rim to provide access to the internal cavities from the top of the container instead of the bottom.

FIGS. 5 and 6 show an isometric view and a cross-sectional view, respectively, of the bottom plate 32. The bottom plate 32 includes a plate rim 60 that engages the access opening 30 of the outer container 14. The plate rim 60 and the bottom plate 32 are preferably sized so that the bottom plate 32 fits tightly within the access opening 30, so that the bottom plate may be pressed firmly into the access opening 30 of the outer container 14 without any special tools and the bottom plate 32 will remain securely within the access opening 30 once it has been pressed into place. The bottom plate 32 also includes a lip 62 that also engages the access opening 30 of the outer container 14. The lip 62 provides a structure to grab onto when the base plate 32 is manually removed from the outer container 14.

Preferably, the bottom plate 32 may be pressed into the access opening 30 and may be removed from the access opening 30 without any special tools, so that the decorative items within the hollow region can be replaced or reconfigured very easily. However, the plate 32 of the invention may be configured to mate with the access opening 30 in the outer container in many different ways and still be contemplated by the present invention. For example, the plate 32 could be provided with screw threads for mating with screw threads on the access opening 30 of the outer container, a snap-fit configuration, a hinge and lock configuration or many other mating configurations that are known in the art.

The decorative container 10 may be provided in many different sizes, depending on the types of decorative items to be displayed and the types of food or other items to be placed in the open area 22. In one preferred embodiment, the container is bowl-shaped and the upper rim of the decorative container is circular and has a diameter of about 10 inches to about 14 inches, preferably about 12 inches. The base of the outer container may have a diameter in the preferred embodiment of about 4 inches to about 8 inches, preferably about 6 inches. The height of the bowl in a preferred embodiment is about 4 inches to about 8 inches, preferably about 6 inches. In this preferred embodiment, the hollow region between the inner and outer containers has a thickness,  $t$ , of at least about  $\frac{1}{4}$  inch, more preferably at least about one half-inch, and most preferably about 0.56 inches. The width of the dividers provides this spacing. The decorative container could also have a canister shape. As mentioned above, many different placements and configurations of the access opening are possible. Where the decorative container is canister shaped, it is anticipated that the removable plate would fit into the upper rim of the decorative container, providing access to internal cavities within the walls of the canister. The decorative container may also be shaped as a tray with removable handles to provide access to internal cavities within the base of the tray.

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The decorative container 10 may be constructed of many different materials that have adequate rigidity for storing items in the open area and for storing decorative objects in the internal cavities. Other desirable characteristics for the material of the decorative container are transparency, ease of manufacture, low cost, durability, washability, and visual attractiveness. Preferably, the components of the decorative container are made of the same material and are molded using well known techniques. Preferable materials for the decorative container include polystyrene and other plastic materials. Preferably, the inner and outer container are joined using an adhesive. However, the inner container and the outer container may be joined using one of many different attachment techniques known in the prior art.

FIGS. 7, 8 and 9 show a wand 70 for use with the decorative container 10 of the present invention. The wand 70 may be useful for positioning decorative items within the internal cavities 26 of the decorative container. The wand may have a firm tip 72 at one end and a soft tip 74 at the other end for assisting with positioning the decorative items. The soft tip 74 may be made out of materials such as foam or cloth. The wand 70 also includes a shaft 76. The shaft 76 is preferably somewhat flexible so that the wand 70 can be used within the curved internal cavities of a bowl shaped embodiment of the decorative container 10 of the present invention.

Preferably, the wand is sized to be easily insertable into the internal cavities, and long enough to reach into the internal cavities. In one preferred embodiment, the wand is about six inches long, with a rigid tip about  $\frac{1}{8}$  inch wide and a soft tip about  $\frac{1}{8}$  inch wide and about one inch long. The wand is preferably made from a plastic material. Two wands may be used with the decorative container.

In the preferred embodiment of the decorative container 10, all components are made of a transparent material to allow viewing of the decorative objects from all angles. However, it is also possible and may be desirable to construct the decorative container 10 with only some portions transparent, such as only the inner container or only the outer container or portions thereof. By transparent, it is meant that objects behind the material are at least somewhat visible to a viewer.

In addition, many different numbers and configurations of internal dividers are contemplated by the present invention. In a preferred embodiment of the decorative container 10, 15 dividers are equally spaced between the inner container 12 and the outer container 14, creating 15 internal cavities 26. It should be understood that many different numbers and spacings of dividers and internal cavities may be desirable and are encompassed by the present invention. It may be desirable to have at least seven internal cavities within the decorative container to allow for a variety of decorative items to be displayed. It is also possible that the dividers 24 may be differently configured than those shown. For example, the dividers in the Figures are planar, but the dividers could also be non-planar, such as having an s-shape.

The decorative container 10 of the present invention allows for custom design of a decorative bowl, so that the decorations may be suited for a personal gift or to a certain room's decor. The present invention is also useful for displaying seasonally oriented decorations because the removable bottom plate allows for ease in changing the decorative objects.

In order to decorate the decorative container of the present invention, the container is placed with the top rim 36 facing down with the bottom plate exposed, or otherwise situated

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so the removable plate is accessible. The plate is then removed from the outer container, providing access to each of the internal cavities and the circular display area within the hollow region. Then decorative objects are placed in the various internal cavities. The wand 70 may be used to assist with placement of the decorative objects. When the decorative objects have been arranged as desired, the plate is pressed back into place in the access opening, possibly using a heavy object to apply pressure to the plate. Alternatively, the bottom plate may be installed in the outer container in many different ways in alternative configurations, such as screwed into place or snapped into place. Once the access opening is closed, the decorative objects are securely contained within the internal cavities. In a preferred embodiment, the internal cavities are not open to the outside environment, thereby preventing unwanted items from entering the internal cavities. The decorative container 10 may then be turned over so that the base rim is facing downward and the open area of the decorative container may then be utilized.

When a change of the decorative items within the internal cavities is desired, the removable plate is removed and the three-dimensional objects are emptied from the internal cavities. The wand 70 may again be useful in urging all of the decorative objects out of the internal cavities. Now the decorative container is available for filling with different decorative objects.

The various embodiments described above are provided by way of illustration only and should not be construed to limit the invention. Those skilled in the art will readily recognize various modifications and changes which may be made to the present invention without strictly following the preferred embodiments and applications illustrated and described herein, and without departing from the true spirit and scope of the present invention which is set forth in the following claims.

What is claimed is:

1. A decorative container for displaying items in internal cavities, the container comprising:
  - a transparent inner bowl nested within a transparent outer bowl thereby defining a hollow region therebetween;
  - an upper rim extending between the inner and outer bowl;
  - a plurality of dividers located within the hollow region to divide the hollow region into a plurality of internal cavities, wherein the dividers are affixed to the outer bowl, wherein the internal cavities are dimensioned to hold decorative three-dimensional objects; and
  - a removable member defined in the upper rim, configured to provide access to the hollow region.
2. The decorative container of claim 1 wherein the inner bowl and outer bowl are at least about one-half inch apart.
3. The decorative container of claim 1 wherein the removable member comprises part of the upper rim.
4. The decorative container of claim 1 further comprising a wand configured to assist with positioning items in the internal cavities.
5. The decorative container of claim 1 wherein the removable member is removable without special tools.
6. The decorative container of claim 1 further comprising a circular divider at a bottom of the hollow region.
7. The decorative container of claim 1 wherein the dividers are equally spaced throughout the hollow region.
8. The decorative container of claim 1 made of polystyrene.
9. The decorative container of claim 1 wherein the upper rim is circular.

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10. The decorative container of claim 1 wherein the upper rim is integral with the inner bowl.

11. The decorative container of claim 1 wherein the diameter of the inner bowl is about twelve inches.

12. A system for decorating a container for displaying 5 items in internal cavities, the system comprising:

a decorative container comprising an inner container nested within an outer container thereby defining a hollow region therebetween, a plurality of dividers located within the hollow region to divide the hollow region into a plurality of internal cavities, and a removable member configured to provide access to the hollow region; and

a wand configured to be inserted into the internal cavities.

13. The decorative container of claim 12 wherein the wand comprises a rigid tip and a soft tip.

14. The decorative container of claim 12 wherein the wand includes a flexible shaft.

15. A decorative container for displaying items in internal cavities, the container comprising:

a transparent inner bowl nested within a transparent outer bowl thereby defining a hollow region therebetween;

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an upper rim extending between the inner and outer bowl; a plurality of dividers located within the hollow region to divide the hollow region into a plurality of internal cavities; and

a removable member defined in the upper rim, configured to enable access to the hollow region upon removal.

16. The decorative container of claim 15 further comprising a wand configured to assist with positioning items in the internal cavities.

17. The decorative container of claim 15 wherein the inner bowl and outer bowl are at least about one-quarter inch apart.

18. The decorative container of claim 15 wherein the inner bowl and outer bowl are at least about one-half inch apart.

19. The decorative container of claim 15 wherein the plurality of dividers are affixed to the outer bowl.

20. The decorative container of claim 15 wherein the removable member comprises part of the upper rim.

\* \* \* \* \*

APPENDIX D  
COPIES OF DICTIONARY DEFINITIONS



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**trans-pa-ci-fic** \ˌtrɑn(t)s-ˈpɑ-si-fɪk/ *adj* (1891) 1 **a**: crossing or extending across the Pacific Ocean (~ airlines) **b**: relating to or involving crossing the Pacific Ocean (~ airfares) 2 **a**: situated or occurring beyond the Pacific Ocean **b**: of, relating to, or involving countries on both sides of the Pacific Ocean (<the ~ economy)

**trans-par-ence** \ˌtrɑn(t)s-ˈpɑr-ənʃ-, -ˈper-ən/ *n* (1594) **TRANSPARENCY** 1 **trans-par-en-cy** \-ən(t)-sē n, pl *cies* (1615) 1: the quality or state of being transparent 2: something transparent; *esp*: a picture (as on film) viewed by light shining through it or by projection

**trans-par-ent** \-ən(t) *adj* [ME. fr. ML *transparent-*, *transparens*, prp. of *transparere* to show through, fr. L *trans-* + *parere* to show oneself] (15c) 1 **a** (1): having the property of transmitting light without appreciable scattering so that bodies lying beyond are seen clearly > PELLUCID (2): allowing the passage of a specified form of radiation (as X rays or ultraviolet light) **b**: fine or sheer enough to be seen through: DIAPHANOUS 2 **a**: free from pretense or deceit: FRANK **b**: easily detected or seen through: OBVIOUS **c**: readily understood *syn see CLEAR* — **trans-par-ent-ly** *adv* — **trans-par-ent-ness** *n*

**trans-par-en-tize** \-ən,-tīz/ *v*-ized; -iz-ing (1925) 1: to make transparent or more nearly transparent (~ tracing paper)

**trans-per-son-al** \ˌtrɑn(t)s-ˈpɜrs-nəl-, -ˈpɑr-sə-nəl/ *adj* (ca. 1906) 1: extending or going beyond the personal or individual 2: of, relating to, or being psychology concerned esp. with esoteric mental experience (as mysticism and altered states of consciousness) beyond the usual limits of ego and personality

**tran-spice-u-ous** \ˌtrɑn(t)s-ˈpi-kjə-wəs/ *adj* [NL *transpicuus*, fr. L *transpicere* to look through, fr. *trans-* + *specere* to look, *see* — more at SPY] (1638): clearly seen through or understood

**trans-pierce** \ˌtrɑn(t)s-ˈpiərs/ *v* [MF *transpercier*, fr. OF, fr. *trans-* (fr. L) + *pierce* to pierce] (1592): to pierce through: PENETRATE

**trans-pir-a-tion** \ˌtrɑn(t)s-ˈpɑ-rā-shən/ *n* (1551) 1: the act or process or an instance of transpiring; *esp*: the passage of watery vapor from a living body through a membrane or pores — **trans-pir-a-tional** \-shənəl-, -shə-nəl/ *adj*

**trans-pire** \ˌtrɑn(t)s-ˈspɪr/ *v* **trans-spired**; **trans-spir-ing** [MF *transpirer*, fr. L *trans-* + *spirare* to breathe] *v* (1597): to pass off or give passage to (a fluid) through pores or interstices; *esp*: to excrete (as plants) in the form of a vapor through a living membrane (*as the skin*) ~ *vi* 1: to give off vaporous material; *specific*: to give off or exude watery vapor esp. from the surfaces of leaves 2: to pass in the form of a vapor from a living body 3 **a**: to be revealed: come to light **b**: to become known or apparent: DEVELOP 4: to take place: GO ON. OCCUR

**usage** Sense 4 of *transpire* is the frequent whipping boy of those who suppose sense 3 to be the only meaning of the word. Sense 4 appears to have developed in the late 18th century; it was well enough known to have been used by Abigail Adams in a letter to her husband in 1775 (there is nothing new *transpired* since I wrote you last—Abigail Adams). Noah Webster recognized the new sense in his dictionary of 1828. *Transpire* was evidently a popular word with 19th-century journalists; sense 4 turns up in such pretentiously worded statements as “The police drill will transpire under shelter-to-day in consequence of the moist atmosphere prevailing.” Around 1870 the sense began to be attacked as a misuse on the grounds of etymology, and modern critics echo the damnation of 1870. Sense 4 has been in existence for about two centuries; it is firmly established as standard; it occurs now primarily in serious prose, not the ostentatiously flamboyant prose typical of the 19th century journalism.

**trans-pla-cent-al** \ˌtrɑn(t)s-ˈplɑ-sen-təl/ *adj* [ISV] (ca. 1929): passing through or occurring by way of the placenta (~ immunization) — **trans-pla-cent-al-ly** \-l̩-ē *adv*

**trans-plan-tal** \ˌtrɑn(t)s-ˈplɑnt/ *v* [ME *transplanteren*, fr. LL *transplantare*, fr. L *trans-* + *plantare* to plant] *v* (15c) 1: to lift and reset (a plant) in another soil or situation 2: to remove from one place or context and settle or introduce elsewhere: RELOCATE 3: to transfer (an organ or tissue) from one part or individual to another ~ *vi*: to admit of being transplanted — **trans-plan-tabil-i-ty** \ˌtrɑn(t)s-ˈplɑnt-ə-bil-i-tē/ *n* — **trans-plan-table** \ˌtrɑn(t)s-ˈplɑnt-ə-bəl/ *adj* — **trans-plan-ta-tion** \ˌtrɑn(t)s-ˈplɑnt-ˈtā-shən/ *n* — **trans-plan-ter** \ˌtrɑn(t)s-ˈplɑnt-ər/ *n*

**trans-plan-t** \ˌtrɑn(t)s-ˈplɑnt/ *n* (1756) 1: a person or thing that is transplanted 2: the act or process of transplanting

**trans-po-lar** \ˌtrɑn(t)s-ˈpō-lər/ *adj* (1850): crossing or extending across either of the polar regions *n* [transmitter + responder] (ca. 1944): a radio or radar set upon receiving a designated signal emits a radio signal of its own and that is used esp. for the detection, identification, and location of objects

**trans-pon-tine** \ˌtrɑn(t)s-ˈpɑn-tin/ *adj* [*trans-* + L *pont-*, *pons* bridge — more at FUND] (1844) 1: situated on the farther side of a bridge 2 *Brit*: situated on the south side of the Thames

**trans-port** \ˌtrɑn(t)s-ˈpɔrt-, ˈpɔrt-, ˌtrɑn(t)s- / *v* [ME, fr. MF or L: MF *transporter*, fr. L *transportare*, fr. *trans-* + *portare* to carry — more at FARE] (14c) 1: to transfer or convey from one place to another (<wing ideas across a living membrane) 2: to carry away with strong and often intensely pleasant emotion 3: to send to a penal colony overseas *syn see BANISH* — **trans-port-abil-i-ty** \ˌtrɑn(t)s-ˈpɔrt-ə-bil-i-tē-, -pɔr-/ *n* — **trans-port-able** \ˌtrɑn(t)s-ˈpɔrt-ə-bəl-, -pɔr-/ *adj*

**trans-port** \ˌtrɑn(t)s-ˈpɔrt-, -pɔrt/ *n* (1611) 1: an act or process of transporting: TRANSPORTATION 2: strong or intensely pleasurable emotion (<*s* joy) 3 **a**: a ship for carrying soldiers or military equipment **b**: a vehicle (as a truck or airplane) used to transport persons or goods **c**: TRANSPORTATION 3 4: a transported convict 5: a mechanism for moving magnetic tape past a recording head *syn see ECSTASY*

**trans-port-a-tion** \ˌtrɑn(t)s-ˈpɑr-ˈtā-shən/ *n* (1540) 1: an act, process, or instance of transporting or being transported 2: banishment to a

\ə/ abut    \˙/ kitten, F table    \ər/ further    \ə/ ash    \ä/ ace    \ä/ mop, mar  
\au/ out    \ch/ chin    \et/ bet    \e/ easy    \g/ go    \i/ hit    \i/ ice    \j/ job  
\j/ sing    \o/ low    \öw/ löw    \oy/ th/ thin    \ih/ the    \ü/ foot    \ü/ foot  
\y/ yet    \zh/ vision    \ä, k/, æ, ö, u, i, e, ü    *See Guide to Pronunciation*

ʌbʊt ʌ kitten, F table ʌrʌ further ʌʌ ash ʌʌ ace ʌʌ mop, man  
 ʌʊt ʌh chin ʌʌ bet ʌʌ easy ʌg go ʌʌ hit ʌʌ ice ʌj job  
 ʌj sing ʌʌ go ʌʌ law ʌʌi boy ʌhʌ thin ʌhʌ the ʌʌʌ foot ʌʌʌ foot  
 ʌy yet ʌhʌ vision ʌʌ, k, ʌ, æ, ʌ, ʌ, ʌ, ʌ see Guide to Pronunciation



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**transition element** *n.* Any of the metallic elements that have an incomplete inner electron shell and that serve as transitional links between the most and the least electropositive in a series of elements. They are characterized by multiple valences, colored compounds, and the ability to form stable complex ions.

**transition metal** *n.* A transition element.

**transition region** *n.* A zone in a seed plant where the vascular tissue of the root changes into the vascular tissue of the stem.

**trans-i-tive** (trân'si-tiv, -zî-) *adj.* 1. *Abbr. t., tr., trans.* Grammar. Expressing an action that is carried from the subject to the object; requiring a direct object to complete meaning. Used of a verb or verb construction. 2. Characterized by or involving transition. — **trans-i-tive** *n.* *Abbr. t., tr., trans.* Grammar. A transitive verb. [Late Latin *transitivus*, passing over, from *transire*, past participle of *transire*, to go over. See *TRANSIENT*.] — **trans-i-tive-ly** *adv.* — **trans-i-tive-ness**, **trans-i-tiv-i-ty** *n.*

**transit lounge** *n.* A waiting room in an airport used typically by international travelers on layovers.

**trans-i-to-ry** (trân'si-tôr'ê, -tôr'ê, trân'zî-) *adj.* Existing or lasting only a short time; short-lived or temporary: "the disorder of his life: the succession of cities, of transitory loves" (Carson McCullers). See *Synonyms at TRANSIENT*. [Middle English *transitorie*, from Old French *transitoire*, from Late Latin *transitoriûs*, from Latin *transire*, having a passageway, from *transitus*, passage. See *TRANSIT*.] — **trans-i-to-ry** *adv.* — **trans-i-to-ry-ness** *n.*

**Trans-jor-dan** (trân'sjôr'dn, trânz'-) *n.* See *Jordan*. — **Trans-jor-da-ni-an** (-jôr-dâ'nē-ən) *adj. & n.*

**Trans-kei** (trân-kâ', -kî') *n.* An internally self-governing Black African homeland in southeast South Africa on the Indian Ocean coast. It was designated a semiautonomous territory in 1963 and granted nominal independence in 1976. Umtata is the capital. Population, 2,400,000. — **Trans-kei'an** *adj. & n.*

**transl.** *abbr.* 1. Translated. 2. Translation.

**trans-late** (trân-lât', trânz-, trân'slât', trânz'-) *v.* — **lat-ed**, — **lat-ing**, — **lates**. — *tr.* 1. To render in another language. 2. *a.* To put into simpler terms; explain or interpret. *b.* To express in different words; paraphrase. 3. *a.* To change from one form, function, or state to another; convert or transform: *translate ideas into reality*. *b.* To express in another medium. 4. To transfer from one place or condition to another. 5. To forward or retransmit (a telegraphic message). 6. *a.* Ecclesiastical. To transfer (a bishop) to another see. *b.* Theology. To convey to heaven without death. 7. Physics. To subject (a body) to translation. 8. Biology. To subject (messenger RNA) to translation. 9. Archaic. To enrapture. — *intr.* 1. *a.* To make a translation. *b.* To work as a translator. 2. To admit of translation. 3. To be changed or transformed in effect. Often used with *into* or *to*: "Today's low inflation and steady growth in household income translate into more purchasing power" (Thomas G. Exter). [Middle English *translaten*, from Old French *translater*, from Latin *translatus*, past participle of *transfere*, to transfer: *trans-*, *trans-* + *latrus*, brought; see *tele-* in Appendix.] — **trans-lat'a-bil-i-ty**, **trans-lat'a-ble** *n.* — **trans-lat'a-ble** *adj.*

**trans-la-tion** (trân-lâ'shan, trânz'-) *n.* *Abbr. tr., trans., transl.* 1. *a.* The act or process of translating, especially from one language into another. *b.* The state of being translated. 2. A translated version of a text. 3. Physics. Motion of a body in which every point of the body moves parallel to and the same distance as every other point of the body; nonrotational displacement. 4. Biology. The process by which messenger RNA directs the amino acid sequence of a growing polypeptide during protein synthesis. — **trans-la-tion'al** *adj.*

**trans-la-tor** (trân-lâ'tar, trânz-, trân'slâ'tar, trânz'-) *n.* *Abbr. tr., trans.* 1. One that translates, especially one employed to render written works into another language. 2. An interpreter. — **trans-la-to-ri-al** (-lâ-tôr'ê-əl, -tôr'-) *adj.*

**trans-lit-er-ate** (trân-lit'ê-rât', trânz'-) *tr.v.* — **at-ed**, — **at-ing**, — **ates**. To represent (letters or words) in the corresponding characters of another alphabet. [*TRANS-* + Latin *littera*, *littera*, letter + *-ATE*.] — **trans-lit'er-a-tion** *n.*

**trans-lo-cate** (trân-lô'kât', trânz'-) *tr.v.* — **cat-ed**, — **cat-ing**, — **cates**. 1. To cause to change from one place or position to another; displace. 2. To transfer (a chromosomal segment) to a new position; cause to undergo translocation.

**trans-lo-ca-tion** (trân'lô-kâ'shan, trânz'-) *n.* 1. A change of location. 2. Genetics. *a.* A transfer of a chromosomal segment to a new position, especially on a nonhomologous chromosome. *b.* A chromosomal segment that is translocated.

**trans-lu-cent** (trân-lô'sent, trânz'-) *adj.* 1. Transmitting light but causing sufficient diffusion to prevent perception of distinct images. 2. Clear; lucid. [Latin *translucens*, *translucens*, present participle of *translucere*, to shine through: *trans-*, *trans-* + *lucere*, to shine; see *leuk-* in Appendix.] — **trans-lu'cence**, **trans-lu'cen-cy** *n.* — **trans-lu'cent-ly** *adv.*

**trans-lu-nar** (trân'lô'nar, trânz'-, trân'slô'nar, trânz'-) *adj.* Extending beyond the moon or the moon's orbit around Earth.

**trans-ma-rine** (trân'ma-rên', trânz'-) *adj.* 1. Crossing the sea. 2. Beyond or coming from across the sea. [Latin *transmarinus*: *trans-*, *trans-* + *marinus*, of the sea; see *MARINE*.]

**trans-mem-brane** (trânsmēm'brân, trânz'-) *adj.* Passing or occurring across a membrane.

**trans-mi-grant** (trânsmi'grânt, trânz'-) *n.* 1. One that

transmigrates. 2. One in transit through a country on the way to the country in which one intends to settle.

**trans-mi-grate** (trânsmi'grât', trânz'-) *intr.v.* — **grat-ed**, — **grat-ing**, — **grates**. 1. To migrate. 2. To pass into another body after death. Used of the soul. [Latin *transmigrare*, *transmigrare*, *trans-*, *trans-* + *migrare*, to migrate; see *MIGRATE*.] — **trans-mi'gra-tor** *n.* — **trans-mi'gra-to-ry** (-mi'grâ-tôr'ê, -tôr'ê) *adj.*

**trans-mi-gra-tion** (trânsmi'grâ'shan, trânz'-) *n.* 1. The act or process of transmigrating. 2. The passing of a soul into another body after death; reincarnation. — **trans-mi-gra-tion-ism** *n.*

**trans-mis-si-ble** (trânsmis'ə-bal, trânz'-) *adj.* That can be transmitted: *transmissible messages*; *transmissible signals*. — **trans-mis'si-bil-i-ty** *n.*

**trans-mis-sion** (trânsmish'an, trânz'-) *n.* 1. *a.* The act or process of transmitting. *b.* The fact of being transmitted. 2. Something, such as a message, that is transmitted. 3. An automotive assembly of gears and associated parts by which power is transmitted from the engine to a driving axle. Also called *gearbox*. 4. The sending of a signal, picture, or other information from a transmitter. [Latin *transmissio*, *transmissio*, a sending across, from *transmissus*, past participle of *transmittere*, to transmit. See *TRANSMIT*.] — **trans-mis'sive** (-mis'iv) *adj.*

**trans-mis-som-e-ter** (trânsmi'sôm'f-ter, trânz'-) *n.* A device used to measure transmission of light through a medium. [*transmissio* (ION) + *-METER*.] — **trans-mis-som'e-try** *n.*

**trans-mit** (trânsmît', trânz'-) *v.* — **mit-ted**, — **mit-tine**, — **mits**. — *tr.* 1. To send from one person, thing, or place to another; convey. See *Synonyms at send*. 2. To cause to spread; pass on: *transmit an infection*. 3. To impart or convey to others by heredity or inheritance; hand down. 4. To pass along (news or information); communicate. 5. *a.* Electronics. To send (a signal), as by wire or radio. *b.* Physics. To cause (a disturbance) to propagate through a medium. 6. To convey (force or energy) from one part of a mechanism to another. — *intr.* To send out a signal. [Middle English *transmitten*, from Latin *transmittere*: *trans-*, *trans-* + *mittere*, to send.] — **trans-mit'ta-ble** *adj.*

**trans-mit-tal** (trânsmît'l, trânz'-) *n.* The act or process of transmitting; a transmission.

**trans-mit-tance** (trânsmît'ns, trânz'-) *n.* 1. A transmission. 2. Physics. The ratio of the radiant energy transmitted to the total radiant energy incident on a given body.

**trans-mit-ter** (trânsmît'ar, trânz'-) *n.* 1. One that transmits: *a transmitter of disease*; *a transmitter of tall tales*. 2. *a.* An electronic device that generates and amplifies a carrier wave, modulates it with a meaningful signal derived from speech or other sources, and radiates the resulting signal from an antenna. *b.* The portion of a telephone that converts the incident sounds into electrical impulses that are conveyed to a remote receiver. *c.* A telegraphic sending instrument.

**trans-mit-ter-re-ceiver** (trânsmît'ar-rî-sê'var, trânz'-) *n.* An electronic device that both transmits and receives communications signals.

**trans-mog-ri-fy** (trânsmôg'rî-fî', trânz'-) *tr.v.* — **fi-ed** (-fid'), — **fi-ing**, — **fi-es** (-fiz'). To change into a different shape or form, especially one that is fantastic or bizarre. See *Synonyms at convert*. [Origin unknown.] — **trans-mog'rî-fi-ca-tion** (-dî-kâ'shan) *n.*

**trans-mon-tane** (trânsmôn'tân', trânz-, trân'smôn-tân', trânz'-) *adj.* Transmontane. [Latin *transmontanus*. See *TRAMONTANE*.]

**trans-mun-dane** (trânsmûn-dân', trânz'-, trân'smûn-dân', trânz'-) *adj.* Existing or extending beyond the physical world.

**trans-mu-ta-tion** (trânsmyoû-tâ'shan, trânz'-) *n.* 1. *a.* The act or an instance of transmuting; transformation. *b.* The state of being transmuted. 2. Physics. Transformation of one element into another by one or a series of nuclear reactions. 3. The supposed conversion of base metals into gold or silver in alchemy. — **trans-mu-ta-tion'al**, **trans-mut'a-tive** (-myôû'tâ-tiv) *adj.*

**trans-mute** (trânsmyoû't', trânz'-) *v.* — **mut-ed**, — **mut-ing**, — **mut-es**. — *tr.* To change from one form, nature, substance, or state into another; transform: "the tendency to transmute what has become customary into what has been divinely ordained" (Suzanne LaFollette). See *Synonyms at convert*. — *intr.* To undergo transmutation. [Middle English *transmuten*, from Latin *transmutare*: *trans-*, *trans-* + *mutare*, to change; see *mut-* in Appendix.] — **trans-mut'a-bil-i-ty**, **trans-mut'a-ble-ness** *n.* — **trans-mut'a-ble** *adj.* — **trans-mut'a-bly** *adv.* — **trans-mut'er** *n.*

**trans-na-tion-al** (trân-nâsh'ə-nal, trânz'-) *adj.* 1. Reaching beyond or transcending national boundaries: "the transnational ramifications of terror networks" (Emanuel Litvinoff). 2. Relating to or involving several nations or nationalities: *transnational organizations*.

**trans-o-ce-an-ic** (trân'shê-ən'ik, trânz'-) *adj.* 1. Situated beyond or on the other side of the ocean. 2. Spanning or crossing the ocean.

**trans-som** (trân'sam) *n.* 1. *a.* A horizontal crosspiece over a door or between a door and a window above it. *b.* A small hinged window above a door or another window. 2. A horizontal dividing bar of wood or stone in a window. 3. A lintel. 4. Nautical. *a.* Any of several transverse beams affixed to the sternpost of a wooden ship and forming part of the stern. *b.* The aftermost



transom